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Audit Report No.25 2008–09
Performance Audit

Green Office Procurement and Sustainable Office Management

Australian National Audit Office

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Canberra ACT
11 March 2009

Dear Mr President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit across agencies in accordance with the authority contained in the *Auditor-General Act 1997*. I present the report of this audit and the accompanying brochure to the Parliament. The report is titled *Green Office Procurement and Sustainable Office Management*.

Following its tabling in Parliament, the report will be placed on the Australian National Audit Office's Homepage—<http://www.anao.gov.au>.

Yours sincerely



Ian McPhee
Auditor-General

The Honourable the President of the Senate
The Honourable the Speaker of the House of Representatives
Parliament House
Canberra ACT

AUDITING FOR AUSTRALIA

The Auditor-General is head of the Australian National Audit Office. The ANAO assists the Auditor-General to carry out his duties under the *Auditor-General Act 1997* to undertake performance audits and financial statement audits of Commonwealth public sector bodies and to provide independent reports and advice for the Parliament, the Government and the community. The aim is to improve Commonwealth public sector administration and accountability.

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Abbreviations

ABS	Australian Bureau of Statistics
ACMA	Australian Communications and Media Authority
AGIMO	Australian Government Information Management Office
ANAO	Australian National Audit Office
APS	Australian Public Service
ASIC	Australian Securities and Investments Commission
CAC	<i>Commonwealth Authorities and Companies Act 1997</i>
CASA	Civil Aviation Safety Authority
CEIs	Chief Executive Instructions
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of the Agriculture, Fisheries and Forestry
DBCDE	Department of Broadband, Communications and the Digital Economy
DEEWR	Department of Education, Employment and Workplace Relations
Defence	Department of Defence
Environment	Department of the Environment, Water, Heritage and the Arts
DOHA	Department of Health and Ageing
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EEGO	Energy Efficiency in Government Operations policy
EMS	Environmental management system
EMP	Energy management plan
ESD	Ecologically sustainable development
FaHCSIA	Department of Families, Housing, Community Services and Indigenous Affairs
Finance	Department of Finance and Deregulation

FMA	<i>Financial Management and Accountability Act 1997</i>
FMB	Fleet Monitoring Body
GCP	Greenhouse Challenge Plus
GJ	Giga (1 000 000 000) Joules
GL	Giga (1 000 000 000) Litre
GRI	Global Reporting Initiative
GLS	Green Lease Schedule
GSM	Grams per square metre
GVG	Green Vehicle Guide
GWh	Giga Watt per hour
HVAC	Heating, ventilation and air conditioning
ICT	Information and communication technology
ISO	International Organization for Standardization
KL	Kilo (1 000) Litre
MFD	Multi functional device
MJ	Mega (1 000 000) Joules
ML	Mega (1 000 000) Litre
NABERS	National Australian Built Environment Rating System
NPC	National Packaging Covenant
OCS	Office central services
PC	Personal computer
PM&C	Prime Minister and Cabinet
SBS	Special Broadcasting Service
VOC	Volatile organic compound

Glossary

Co-mingled Recycling	Recycling of metals, plastics, paper products and glass in a single bin system.
Ecological Footprint	The ecological footprint is a tool used to measure ecological sustainability and tracks past and present demands made by people on the earth's renewable natural resources. It tracks how much humanity as a whole consumes and compares this amount to the resources nature can provide.
Ecologically sustainable development (ESD)	Using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased.
Environmental Management System	An organisational plan and strategy to identify and to manage the environmental impact of the organisation.
<i>Environmental Protection and Biodiversity Conservation Act 1999</i>	Commonwealth Act related to the protection of the environment and the conservation of biodiversity. The objectives of the act include providing for the protection of the environment, especially those aspects of the environment that are of national environmental significance and to promote ecologically sustainable development.
Green Star	Nationally accredited environmental rating scheme that evaluates the environmental design and achievements of buildings based on nine categories.
Green Vehicle Guide	A vehicle emissions and air pollutants rating scheme for new motor vehicles that are under 3.5 tonnes gross vehicle mass.
NABERS Energy	A rating system managed by the NSW Department of Environment and Climate Change that measures building and tenancy energy performance. Formerly known as ABGR.

National Packaging Covenant		A co-regulatory arrangement between Australian Governments and the packaging industry to reduce the environmental impact of post consumer packaging.
Office Services	Central	Energy used for services in office buildings common to all tenants. It can include building air conditioning, lifts, security and lobby lights and domestic hot water, as defined in the Energy Efficiency in Government Operations policy.
Server or desktop virtualisation		A method of consolidating computer hardware which typically aims to achieve higher utilisation rates and, as a result, reduce capital and energy costs.
Tenant and Power	Light	Energy used in tenant operations. It can include tenancy lighting, office equipment, supplementary air conditioners and boiling water units, as defined in the Energy Efficiency in Government Operations policy.
Whole of Life assessment		The process of identifying and documenting all the costs involved over the life of an asset.

Summary and Recommendations

Summary

Introduction

1. Government agencies purchase, lease or consume a significant range of goods and services. In 2007–08, the procurement of goods and services by Australian Government agencies was valued at over \$26 billion. These include office supplies, vehicles, information and communications technology, energy, waste and water services as well as office buildings and facilities. While these goods and services are procured for agencies to achieve their outcomes, they do have an environmental impact. This impact includes greenhouse gas emissions (such as from energy consumption in buildings and from vehicles), waste to landfill from paper, equipment and office refurbishments as well as the consumption of scarce resources such as fresh water and fossil fuels.
2. The Australian Government has indicated that it is seeking to be at the forefront of environmental purchasing practice. In May 2008, the Prime Minister also commented that ‘the Government accepts its own responsibility to provide practical leadership...with practical measures to reduce our own environmental footprint and measures to harness savings from more efficient use of energy and water’.¹
3. Audit Report No 22, 2005–06 *Cross Portfolio Audit of Green Office Procurement* identified a small number of better practice examples of green office procurement across the Australian Government. The audit also identified shortcomings in achieving the Government’s objective to be at the forefront of sustainable procurement practice. As a consequence, the audit concluded that sustainable development had not been fully integrated into Australian Government operations.
4. Significant improvement was required by agencies in terms of introducing targets for water, waste, energy and general procurement, and in implementing regular monitoring and reporting. The ANAO made specific recommendations to improve performance in sustainability. The 43 agencies involved in the audit generally agreed with or were supportive of the

¹ Leadership for Long Term Sustainability: The Roles of Government, Business and the International Community, Address to the National Business Leaders Forum on Sustainable Development, Parliament House, Canberra, 19 May 2008.

recommendations. A summary of progress against the recommendations from the 2005–06 report are at Appendix 2.

Audit scope and objective

5. The objective of this audit was to assess and report on the progress being made by Government agencies in achieving better practice in green office procurement and sustainable office management. The scope of the audit included agencies incorporated under the *Financial Management and Accountability Act 1997* as well as a sample of bodies incorporated under the *Commonwealth Authorities and Companies Act 1997*. Sixty-three agencies were included in an audit survey. Detailed validation was carried out in nine of these agencies.

6. The audit also relied on wider whole-of-government data sets on energy use in Australian Government operations and the Australian Government vehicle fleet as well as annual reports from agencies. Where necessary, the ANAO also consulted with other parties such as state agencies and building owners. The audit sought to assess progress relevant to sustainable development in the following areas:

- policies and procedures underpinning sustainable practices;
- higher value office consumables such as paper, information and communications technology and vehicles;
- water and waste management;
- energy use;
- sustainability in buildings and tenancies; and
- sustainability reporting.

Conclusion

7. Australian Government agencies have made some progress towards more sustainable development practices since the 2005 audit. There are now more examples of agency initiatives to better conserve resources improve environmental performance and reduce corporate costs, particularly in energy and water conservation. However, as was the case in 2005, there is a wide disparity of performance across agencies from very poor to better practice. Measuring performance in waste management and water conservation is also still problematic because of the lack of consistency in measurement and gaps in

performance information. The absence of a comprehensive sustainability framework, as recommended in 2005, is constraining further progress.

8. Larger agencies such as the Department of Defence, Centrelink, Medicare Australia and the Australian Taxation Office have made progress towards more sustainable practices since 2005. This progress may also reflect their capacity compared to smaller agencies. Substantive progress has also been made in relation to environmental controls in individual agencies and in the reporting on energy use in Australian Government operations. Key controls such as environmental management systems are becoming more common practice in building and facility management. However, the design and quality of the majority of environmental management systems could be significantly improved; particularly in the application of measurable targets.

9. Notwithstanding progress in particular agencies, as a whole, the Australian Government public sector has considerable work to do if it is to achieve its goal of being at the forefront of sustainable procurement practice. Many of the issues raised in the 2005 audit remain unresolved and many of the recommendations have yet to be fully implemented. More action is required from agencies if leadership is to be demonstrated in energy efficiency, water conservation and waste management. Energy efficiency is particularly important given that energy use accounts for over 95 per cent of greenhouse emissions from Australian Government agencies.

10. There is considerable scope to reduce the 'ecological footprint'² of Australian Government agencies. Positive results will not be achieved without a stronger effort from all Australian Government agencies that builds on the success of those agencies that have already integrated sustainable practices into their business operations.

11. Ideally, agencies should develop an integrated sustainability framework that identifies improvement opportunities and investment priorities tailored to their business requirements. Where agencies have limited capacity or resource constraints, there are still many opportunities to achieve 'quick wins' and implement cost effective measures to improve sustainability.

² The ecological footprint is a tool used to measure ecological sustainability and tracks past and present demands made by people on the earth's renewable natural resources. It tracks how much humanity as a whole consumes and compares this amount to the resources nature can provide. Available from <<http://www.environment.gov.au/soe/2006/publications/drs/indicator/434/index.html>> [accessed 25 November 2008].

The automated shut down of monitors and computers when not in use will provide immediate energy and cost reductions. Setting printers to print double sided as a default and reducing the weight of paper used for external publications will also offer immediate savings. While the implementation of energy efficiency initiatives will involve some capital cost, the resultant savings from such measures would be ongoing and further increase over time as energy costs increase.

12. Agencies will obviously need to prioritise their sustainability actions with an initial focus on meeting government requirements and achieving cost effective outcomes. For larger agencies, a focus on primary sites or administrative areas with the most significant environmental impacts would be expected to yield the best environmental returns. It is appreciated that the actions put in place will, to a large extent, depend upon the particular circumstances facing each agency. Full implementation will take time to complete.

13. This report contains a wide range of initiatives and practical examples for agencies to consider when improving performance within a more sustainable office environment.

Key findings by chapter

Agency policies and procedures (Chapter 2)

Chief Executive Instructions and internal policies

14. Chief Executive Instructions (CEIs) and internal policies explain the goals and policies of an agency. The 2008 ANAO survey responses indicated that there was an improvement in the extent to which agencies included environmental considerations in their CEIs and internal policies. The application of whole-of-life cycle costing to major purchasing has increased from 50 per cent in 2005 to 75 per cent in 2008. The number of agencies with instructions and policies in place to minimise environmental impacts improved from 42 per cent in 2005 to 56 per cent in 2008. Approximately a quarter of agencies now explicitly state their commitment to more sustainable practices within their internal documentation. As the survey responses indicate, there is still considerable scope for imbedding environmental considerations into core business operations through Chief Executive Instructions or internal policies.

Guidance and promotion of more sustainable practices

15. The 2005 audit recommended that the then Department of the Environment and Heritage and the then Department of Finance and Administration improve web-based access for agencies and provide better and more up to date information on sustainable practices. From the 2008 ANAO survey responses, 95 per cent of agencies stated that they found the Department of the Environment, Water, Heritage and the Arts' (Environment) website on sustainability in government to be of use. This is an improvement on the 2005 survey results where only 73 per cent of agencies found the website guidance of use. Nevertheless, many of the improvements suggested in the 2005 audit were raised again in the 2008 responses.

16. Guidance in sustainability has also been improved through a Government Agencies Environment Network (GAEN). The network involves some 30 agencies and was established in 2006 to 'drive environmental performance improvements within public agencies.' It aims to 'share best practice ideas on environmental management, initiate best practice activities for public agencies and facilitate uptake of ideas within agencies.' The GAEN is filling the 'expectation gap' caused by the inability of Environment to meet the growing needs of agencies to access relevant and up-to-date better practice information on all aspects of sustainability. While recognising the contributions of these agencies, there is a strong case for Environment to take a more active leadership and coordination role in relation to promoting more sustainable practices.

Environmental management systems

17. An environmental management system (EMS) is a framework of cohesive management elements that an organisation may use to provide information on and set priorities for minimising its impact on the environment. The 2005 audit found very few agencies were applying better practice in this area and recommended that agencies give consideration to implementing an accredited EMS in at least one of their larger sites. From the 2008 survey, the number of agencies with an EMS certified to ISO 14001 increased from the seven in 2005 to 13 in 2008; those agencies with an EMS in place without ISO 14001 certification, also increased from 25 to 27 over the same period; and a total of 1 758 sites (approximately 46 per cent) had an EMS. In 2005, the ANAO also recommended that agencies implement challenging but realistic targets as part of the design and implementation of their EMS. The 2008 survey results revealed that some progress has been made since 2005. However, the

number of agencies without firm targets (in key areas such as energy, water and waste) remains high at 43 per cent.

Higher value office consumables (Chapter 3)

18. The use of paper and information and communication technology (ICT), is common to most office environments. They are used in relatively large quantities and can have significant environmental, and often financial, impacts during their lifecycle. Motor vehicles are also a feature in most agencies and have significant environmental and financial impacts.

Paper use by Australian Government agencies

19. The Australian government is a significant consumer of office paper, with surveyed agencies reporting an aggregate internal use of over 6 500 tonnes per annum. From the reported survey data, the average amount of paper used per person in Australian Government operations was just over 18 reams. Since the audit in 2005, the proportion of agencies using paper with recycled content has increased from 43 to 71 per cent. The survey data indicates that this increase has been achieved with no significant increase in relative cost as the price of recycled paper has declined since 2005.

20. There is still scope for agencies to reduce their internal paper consumption (and simultaneously reduce costs) through double sided printing. The ANAO survey data showed that 73 per cent of agencies procured only duplex capable printers and copiers while 67 per cent set duplex printing as default. External printing (that is, publications, pamphlets and forms) can exceed internal printing in some agencies. Thirty-eight per cent of agencies advised they use at least some recycled paper in their external printing. A small number of agencies also required ISO 14001 accreditation for their printers or an environmental certification standard for their printing stock. This contrasts with the 53 per cent of agencies that indicated they take no steps to reduce the environmental impacts of their external printing.

Environmental performance of the Australian Government motor vehicle fleet

21. The Australian Government is a significant consumer of motor vehicles with the Government fleet, including the Department of Defence 'white vehicle fleet',³ having over 13 000 vehicles in total. In February 2003, a target was

³ The Defence white fleet consists of non-military, commercially available passenger and commercial vehicles.

established to have 28 per cent of the Government fleet vehicles scoring in the top half of the Green Vehicle Guide⁴ (GVG) by December 2005. This target was achieved in June 2007. The proportion of vehicles in the top half of the GVG by June 2008 was 36 per cent. The target was reviewed by the Government Leadership in Sustainability Taskforce⁵ in late 2008 and a revised target has been proposed to Ministers to achieve more sustainable and cost effective vehicle fleets. At the date of preparation of this report, there has been no decision to update the target or revise the guidelines.

22. The 2005 audit highlighted tensions between costs, preferences for Australian made vehicles and meeting the Government's goal to reduce emissions. In 2008, these tensions still exist. Consistent with the findings in the 2005 audit, discounts of up to 30 per cent for large Australian made six cylinder cars are helping to keep the proportion of large cars in the fleet high. The most popular small cars tend to receive around ten per cent discount, while the most popular medium sized cars receive a discount of around 18 per cent. However, when considered on a whole-of-life cycle basis, large vehicles are 35 per cent more expensive than small cars.

23. Although the Defence white fleet was not included when the original GVG target was set, Defence advised that it is working towards achieving a target of 28 per cent of its passenger vehicles scoring a GVG rating greater than 10.5. However, with only seven per cent of vehicles currently in the top half of the GVG, little progress has been made in this area. The poor environmental performance of the Defence fleet may be partly explained by the high proportion of commercial vehicles (55 per cent), which have low GVG scores. However, other large agencies with a similar proportion of commercial vehicles in their fleets manage to have between 14 and 25 per cent of vehicles in the top half of the GVG. Defence advised that it is conducting further investigations into improving the environmental rating of its vehicle fleet.

⁴ The guide provides information about the environmental performance of new light vehicles (up to 3.5 tonnes gross vehicle mass) sold in Australia. Vehicles are given a rating out of 10 for their greenhouse emissions and air pollution rating.

⁵ In March 2008, the Government established a taskforce to examine options to improve the sustainability of Australian Government operations.

Information and Communications Technology

24. In an office environment, data centres, computers, printers, copiers and multi-functional devices all consume energy. Large organisations can spend up to ten per cent of their ICT budgets on energy costs.

Energy use in ICT

25. The ANAO's 2005 audit recommended that agencies consider energy efficiency in their ICT purchases. In the 2008 survey, 65 per cent of agencies advised that they now consider energy consumption in their ICT procurement. In addition, the vast majority of agencies indicated they had implemented at least one measure to reduce energy consumption of office and ICT equipment. Some of the 48 per cent of agencies who shut down personal computers (PCs) overnight, reported significant savings from the initiative.

26. Data centres are a significant area of energy use, typically accounting for 15 to 40 per cent of tenancy energy consumption. An Environment review has identified potential energy savings of up to 33 per cent for data centres through better design layout and upgrading infrastructure. An Environment pilot computer infrastructure project also identified energy savings of 83 per cent compared to the traditional model.

ICT Waste (e-waste)

27. Approximately 100 000 desktop computers and laptops are being replaced by the Australian Government every year. A significant proportion will end up in the waste stream. Only 16 agencies (25 per cent) reported that their contracts for the supply of ICT included product stewardship requirements in relation to the disposal of ICT equipment. There has been a lack of progress in developing national standards for ICT waste management. However, this should not preclude agencies from giving priority to this area.

Waste and water management (Chapter 4)

Waste management

28. The quantity of solid waste produced in Australia continues to grow. The ANAO's 2005 audit found that the performance of agencies in managing waste was poor and recommended waste targets and improved measurement and reporting be introduced across all agencies. The ANAO also recommended agencies implement co-mingled and organic recycling schemes for office waste and include clauses in purchasing contracts to minimise packaging waste.

29. Little has changed in waste management since 2005. Performance across Australian Government agencies varies considerably. Agencies that have implemented recycling for co-mingled office waste increased from 65 per cent in 2005 to 89 per cent in 2008. Organic recycling increased from 28 per cent in 2005 to 33 per cent in 2008. Only 10 per cent of surveyed agencies were able to provide complete reporting on all waste streams. Only 21 per cent of agencies include contract clauses to minimise packaging waste. From the available data, the average rate of diversion from landfill was 67 per cent compared to Environment at 74 per cent.

30. The majority of surveyed agencies (52 per cent) were unable to provide any waste reporting data despite agencies advising Environment in 2006–07 that waste management reporting systems were in place or under development. When agencies have been required to measure and report on waste, such as under the Government's commitment to the National Packaging Covenant (NPC)⁶, performance by the majority of agencies was poor. To date, Australian Government agencies have not collectively been able to provide any meaningful performance data to indicate the success or otherwise of the NPC Action Plan (July 2006–June 2008). If Environment is to be in a position to report on progress in the next NPC reporting period (2008–10), there will need to be considerable improvement in the quality of data provided by agencies.

Water consumption and conservation

31. Commercial office buildings use a significant amount of water. Although there is no definitive figure on the cost of water for the Australian Government, an ANAO estimate puts the figure at approximately \$14 million per annum. Improvements in water conservation measures have been identified and progress has been made since 2005. More than 80 per cent of agencies now take steps to detect and rectify leaks (35 per cent in 2005) and over 70 per cent have installed reduced flow or sensor taps compared to less than 30 per cent in 2005.

32. Despite the majority of agencies indicating they have taken steps to reduce water consumption, knowledge of actual water use was poor. Only

⁶ The NPC is an arrangement between Australian governments and the participants in the packaging supply chain. The Australian Government has been a signatory to the NPC since 1999. The covenant aims to minimise the environmental impacts of consumer packaging waste throughout the entire life cycle of consumer products.

35 per cent of surveyed agencies were able to measure water usage at one or more sites, a small improvement from 28 per cent in 2005.

Energy efficiency in buildings and facilities (Chapter 5)

33. For Australian Government agencies, total energy consumption in 2006–07 (excluding Defence Operations), was approximately 9 million gigajoules. This consumption contributed to over 95 per cent of greenhouse gas emissions from Australian Government agencies.⁷

Energy efficiency in Government operations

34. In September 2006, the then Government released a new energy policy, *Energy Efficiency in Government Operations* (EEGO), with revised energy intensity portfolio targets to be achieved by 2011–12. The overall goal of the EEGO policy is to reduce the Australian Government's energy intensity. These targets represent a 25 per cent reduction in energy intensity for tenant light and power (TLP) and a 20 per cent reduction in energy intensity for office central services (OCS) from the 2006 base year.

35. Data from the draft *Energy Use in the Australian Government's Operations* 2006–07 report, indicated that energy intensity has decreased incrementally over the last eight years and a number of agencies are already meeting the intensity targets for TLP (28 per cent) and for OCS (41 per cent). However, there is a wide range in performance from poor to better practice and there is considerable scope for improving energy efficiency in the majority of agencies.

36. The ANAO estimated that the additional cost incurred by agencies not yet meeting the EEGO energy targets for the two categories is \$17 million per annum. If agencies could reduce their consumption across other common stationary energy categories by the same proportion, \$75 million per annum could be saved from the Australian Government's energy budget. While implementation of energy efficiency initiatives such as lighting upgrades and enhanced metering arrangements will involve some capital cost, the savings from such measures will be ongoing. Although the recovery of these costs will vary depending on the circumstances in each agency, the recent increase in electricity costs experienced by Australian Government agencies will reduce

⁷ Department of the Environment, Water, Heritage and the Arts, draft *Energy Use in Australian Government's Operations 2006–07 Report*, p.11.

pay back periods. Examples have been provided by agencies that illustrate recovery of relevant costs in less than 12 months.

Defence performance against energy policy requirements

37. The Department of Defence (Defence) is by far the largest energy consumer in the Australian Government, accounting for almost 45 per cent of total consumption (excluding Defence Operations). The 2006 EEGO policy required Defence to develop a comprehensive energy management strategy by the end of 2006 and progressively install sub-meters at Defence bases to better monitor and manage energy use and report against specific end use categories.

38. Defence released its Energy Strategy internally in May 2007. The strategy established a target of a ten per cent energy reduction below the 2005–06 baseline to be met by June 2008. Defence data indicates that energy consumption for major Defence bases has increased by approximately three per cent (10 GWh) compared with the 2005–06 baseline year, despite the implementation of a number of well-targeted energy efficiency initiatives.

39. Defence is in the early stages of implementing its sub-metering program. The pilot metering phase has been completed and trialled across 15 bases. Fifty-two bases (covering about 80 per cent of Defence energy use) have been targeted for sub-metering. By August 2008, about one per cent of the new meters had been rolled out. The sub-meter retrofit program is expected to be rolled out over two to three years, installing some 2 000 new sub-meters. Defence's ability to meet the requirements set out in the EEGO policy will play a critical role if the Australian Government is to meet its energy reduction targets by 2011–12, and will require a concerted effort.

Energy efficiency initiatives being undertaken by agencies

40. In 2005, the ANAO audit recommended that agencies introduce an energy management plan; conduct energy audits; and implement all energy conservation initiatives that are cost effective within remaining lease periods. This recommendation took into account the environmental policy objectives of the then government and the potential financial savings that could accrue to agencies over time.

41. Energy management plans (EMP), along with energy audits, are important steps for agencies' seeking to reduce their energy consumption. Of the agencies that met the OCS target of 400 MJ/m²/annum in 2006–07, 78 per cent advised that they had implemented an EMP. Similarly, 61 per cent

of agencies that had already met the policy target for TLP for 2011–12 indicated that they had implemented an EMP.

Sustainability in buildings and tenancies (Chapter 6)

42. Australian Government agencies occupy approximately 13 per cent of the commercial office property market covering 4.4 million square metres. Under the EEGO policy (2006) a minimum standard of energy performance of 4.5 NABERS Energy rating⁸ is required for new buildings, new leases and major refurbishments over 2 000 square metres. The policy also established a Green Lease Schedule (GLS), applicable to new leases over 2 000 square metres for leases over two years.⁹

Progress towards meeting EEGO policy requirements in new buildings and tenancies

43. There was very limited data available to provide an indication of actual performance in new buildings and tenancies, as only a small number of new buildings or tenancies are completed each year. Nevertheless, ANAO survey data, supported by annual reports, indicates that agencies are generally seeking to achieve at least a 4.5 NABERS Energy rating for buildings and tenancies. Preliminary data indicates that new buildings for AusAID and the Australian Taxation Office are performing on or just below the intended 5 NABERS Energy rating.

44. Since its commencement in 2006, twenty five agencies indicated that they have at least one GLS in place comprising 41 sites or nearly two per cent of total agency sites that were captured in the survey. It is too early to make conclusive comments regarding the effectiveness of the GLS in delivering measurable environmental outcomes.

Progress in implementing the ANAO's 2005 audit recommendations

45. The 2005 audit report recommended that agencies consider an appropriate energy rating scheme and develop an efficiency target for tenancies in their property portfolio. The survey data indicated that

⁸ NABERS Energy is a nationally accredited performance based rating scheme which benchmarks a building or tenancy's greenhouse impact on a scale of one to five, one star being the most polluting and five stars the least.

⁹ GLSs are designed to improve the energy efficiency of a tenancy through the implementation of five mandatory criteria, including an energy management plan. The leasing arrangement sets out specific responsibilities and incentives for the tenant and the building owner.

26 agencies (41 per cent) have at least one site that has been rated for energy efficiency using the NABERS Energy rating. The total number of assessed sites was 55, which accounts for only 2.4 per cent of total agency sites that were captured in the survey. Very few agencies are able to measure and report on the energy performance of their property portfolio.

Waste from construction, refurbishments and fit-outs

46. Survey results indicate that there has been a general improvement in more sustainable building and refurbishment materials since 2005. However, the recycling of construction and refurbishment waste is still a low priority for most agencies. The 2008 survey indicated that only 13 agencies (21 per cent) had provisions for minimising and/or recycling of waste generated in their contracts for refurbishments (a decrease from 31 per cent in 2005) and only two agencies were able to provide estimates of the amount of waste going to landfill from the refurbishments. This figure was similar to 2005 when only three agencies provided estimates. Guidance for office refurbishments that set required environmental standards and practices to minimise waste going to landfill would be particularly helpful for agencies.

Sustainability reporting (Chapter 7)

47. Mandatory environmental reporting in annual reports is required under section 516A of the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). Successive ANAO audits in 2002–03 and in 2005–06 have found shortcomings in the capacity of agencies to meet these mandatory reporting requirements of the EPBC Act.¹⁰ The Senate Standing Committee on Finance and Public Administration in March 2008 also highlighted ‘the lack of sufficient information and numerical data to be able to understand the agencies’ actual effect on the environment.

48. An analysis of 65 annual reports for 2006–07 (based on departmental structures prior to the 2007 election) identified that there is a wide range of information reported by agencies with little consistency or focus on common performance activities. The depth of analysis and information in each report varied from non-compliance to well developed better practice. The analysis revealed that 52 agencies (80 per cent) gave insufficient attention to the effect of the agency’s impact on the environment while only 28 agencies (43 per cent)

¹⁰ ANAO Audit Report No.41 2003–04, *Annual Reporting on Ecologically Sustainable Development* and ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*.

demonstrated good or better practice in identifying measures undertaken to minimise environmental impact.

Recommendations

49. The ANAO made seven recommendations designed to assist agencies in meeting the Government's stated expectations in sustainable development and promote better practice.

Summary of agencies' responses

50. Twenty-two agencies were sent the draft report for comment. These agencies were the subject of audit findings. In other cases the findings were pertinent to the administrative functions of particular agencies. The responses from agencies are set out in Appendix 1 of the report.

51. All agencies that responded were generally supportive of the recommendations and agreed to all recommendations. However, some agencies commented on the constraints imposed by the existing standard of available building stock and the period of nominal occupancy for existing leases. The cost and resource implications of undertaking some measures, such as reporting on water consumption or waste, was also referred to.

Recommendations

Listed below are recommendations discussed in the body of the report. Because Australian Government agencies are at different stages in the implementation of sustainable practices, the priority of the recommendations will reflect the circumstances and stage of development within each agency.

Recommendation No. 1
Para 2.28

To strengthen the quality and consistency of environmental management systems, the ANAO recommends that agencies (where they have not already done so), ensure that their system has quantifiable objectives that reflect better practice as well as both short and longer term sustainability goals.

Agencies' responses

All agencies agreed to or were supportive of this recommendation.

Recommendation No. 2
Para 3.48

To improve the energy efficiency of information and communications technology (ICT) equipment, the ANAO recommends that agencies (where they have not already done so) introduce:

- (a) environmental criteria in ICT business planning and procurement that explicitly requires energy efficiency and environmental performance standards for equipment; and
- (b) an ICT power management policy, that includes measures such as the automatic shut down of monitors and personal computers when not in use.

Agencies' responses

All agencies agreed to or were supportive of this recommendation.

**Recommendation
No. 3**

Para 4.17

To improve sustainability practices in waste management the ANAO recommends that agencies (where they have not already done so):

- (a) consider practical measures to divert waste from landfill, such as organic and co-mingled waste recycling for primary sites;
- (b) require waste service providers to report the weight of major waste streams, including paper recycled, co-mingled waste recycled and general waste to landfill, in future waste management contracts;
- (c) set agency-wide targets based on a standardised measure such as the weight of waste generated per person and/or diversion from landfill; and
- (d) report performance against these targets as part of agency commitments under the National Packaging Covenant obligations.

Agencies' responses

All agencies agreed to or were supportive of this recommendation.

- Recommendation No. 4**
Para 4.34
- To improve water conservation, the ANAO recommends that agencies (where they have not already done so):
- (a) consult with building owners to obtain annual data on water consumption where practicable;
 - (b) set agency-wide water reduction targets and implement cost effective water conservation measures for all primary sites; and
 - (c) monitor and publicly report progress against these water reduction targets.

Agencies' responses

All agencies agreed to or were supportive of this recommendation.

- Recommendation No. 5**
Para 5.41
- To reduce energy consumption in Australian Government operations and improve compliance with Government policy, the ANAO recommends that agencies (where they have not already done so):
- (a) develop and implement an energy management plan that takes into account operational and management requirements across their property portfolio;
 - (b) conduct energy audits, where appropriate, to determine high priority energy savings that can be made across the organisation; and
 - (c) implement cost effective energy conservation initiatives within remaining lease periods.

Agencies' responses

All agencies agreed to or were supportive of this recommendation.

**Recommendation
No. 6
Para 6.32**

To improve the sustainability of Australian Government operations, the ANAO recommends that the Department of the Environment, Water, Heritage and the Arts in consultation with other agencies:

- (a) develops and disseminates guidance for office refurbishments that set required environmental standards and practices to minimise waste going to landfill from Australian Government refurbishments; and
- (b) considers introducing a standard requirement for agencies to have a waste minimisation plan for refurbishments over 2 000 square metres.

Agencies' responses

All agencies agreed to or were supportive of this recommendation.

**Recommendation
No. 7
Para 7.26**

To enhance the consistency and comprehensiveness of the annual reporting required under section 516A of the *Environment Protection and Biodiversity Conservation Act 1999*, the ANAO recommends that the Department of the Environment, Water, Heritage and the Arts revise the guidance material provided to agencies and include core mandatory performance indicators for operational environmental impacts in key areas such as energy, water and waste.

Agencies' responses

All agencies agreed to or were supportive of this recommendation.

Audit Findings and Conclusions

1. Background

This chapter provides an overview of green office procurement and sustainable office management, including current policy requirements, changes since the last ANAO audit in 2005 and an overview of international and state experiences. The audit objective and scope are also outlined.

Green office procurement and sustainable office management

1.1 The Australian Government has indicated that it is seeking to be at the forefront of environmental purchasing practice through¹¹:

- buying goods and services that seek to minimise possible environmental impact;
- working with industry to encourage continuous reduction in the adverse environmental impact of goods and services; and
- assessing the environmental impact of goods and services against informed and internationally recognised standards and methods.

1.2 While these goods and services are necessary for agencies to achieve their outcomes, they do have an environmental impact. This impact includes greenhouse gas emissions (such as from energy consumption in buildings and from vehicles), waste to landfill from paper, equipment and office refurbishments as well as the consumption of scarce resources such as fresh water and fossil fuels.

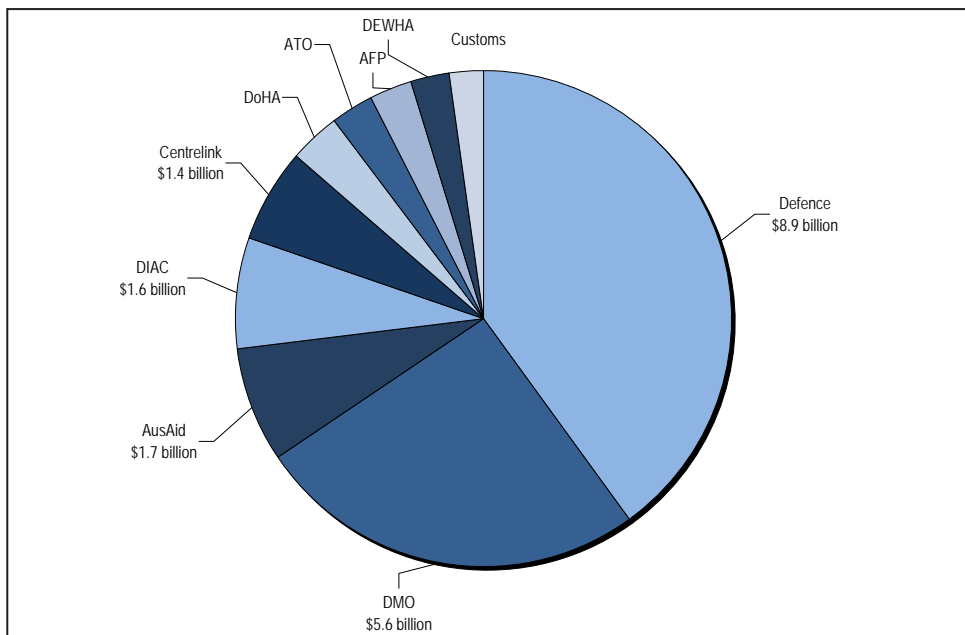
1.3 Procurement of goods and services by Australian Government agencies was valued at over \$26 billion in 2007–08.¹² The distribution of contracts for the top ten agencies by value in 2007–08 is outlined in Figure 1.1.

¹¹ Department of the Environment, Water, Heritage and the Arts, *Policy Framework for Greening of Government* 2007, available from <<http://www.environment.gov.au/settlements/government/purchasing/policy.html>> [accessed 6 November 2008].

¹² Department of Finance and Deregulation, *Statistics on Commonwealth Purchasing Contracts*, 2008.

Figure 1.1

Value of contracts for the top ten agencies 2007–08



Source: Department of Finance and Deregulation (AusTender)

Cross portfolio audit of green office procurement

1.4 The ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement* identified a small number of better practice examples of green office procurement across the Australian Government. This audit identified gaps in the application of whole-of-life cycle costing and in the management of the environmental impacts of procurement decisions. The audit identified shortcomings in achieving the Government’s objective to be at the forefront of sustainable procurement practice. As a consequence, sustainable development had not been fully integrated into Australian Government operations.

1.5 Significant improvement was required by agencies, in terms of introducing targets for water, waste, energy and general procurement, and implementing regular monitoring and reporting. The ANAO made specific recommendations to improve performance in sustainability. In responding to the audit, 43 agencies generally agreed with or were supportive of the recommendations. The audit recommended that the then Department of the Environment and Heritage introduce a comprehensive sustainability

framework. The Department supported this recommendation but noted the limitations on the number of strategic actions that could be pursued at the same time. A summary of progress against the recommendations from the 2005–06 report are at Appendix 2.

The procurement policy environment

1.6 ‘Value for money’ is the core principle underpinning Australian Government procurement. In a procurement process, this principle requires a comparative analysis of all relevant costs and benefits of each proposal throughout the whole procurement cycle (whole-of-life costing). Under the *Financial Management and Accountability Act 1997* (FMA Act), Chief Executives must promote the proper use of resources within the framework of policies set by the Government. In effect, this means that agencies are expected to achieve efficient, effective and ethical procurement outcomes as required by section 44 of the FMA Act. This obligation is reinforced by the requirement in FMA *Regulation 9* that Chief Executives and other approvers of public expenditure must be satisfied that the proposed expenditure is in accordance with the policies of the Government.¹³

1.7 Bodies subject to the *Commonwealth Authorities and Companies Act 1997* (CAC Act) are legally and financially separate from the Commonwealth and are generally not subject to the Commonwealth Procurement Guidelines. However, 20 CAC Act bodies listed in Schedule 1 of the Commonwealth Authorities and Companies Regulations 1997 (CAC Regulations) are subject to section 47A of the CAC Act and have been directed by the Finance Minister to apply the Commonwealth Procurement Guidelines.¹⁴

Environmental and sustainability framework for agencies

1.8 Since the ANAO audit in 2005, no comprehensive sustainability requirements have been introduced. However, in 2006 a new energy efficiency policy was introduced by the previous government.¹⁵ In May 2008, the Prime Minister commented that:

¹³ Department of Finance and Deregulation, *Updated Commonwealth Procurement Guidelines*, 1 December 2008, p. 5.

¹⁴ *Ibid.*, p.5.

¹⁵ Department of the Environment, Water, Heritage and the Arts, *Energy Efficiency in Government Operations* (EEGO), 2006.

The Government accepts its own responsibility to provide practical leadership in our response to climate change – with practical measures to reduce our own environmental footprint and measures to harness savings from more efficient use of energy and water.¹⁶

1.9 In March 2008, the Government established a taskforce to examine options to improve the sustainability of Australian Government operations, particularly in terms of reducing energy and water use and increasing the recycling of waste. However, at the time of the audit, there has been no significant change in policy requirements. Consequently, the ANAO tested compliance with existing policy and better practice. Table 1.1 outlines current environmental policy requirements for agencies along with published guidelines.

¹⁶ Leadership for Long term Sustainability: The Roles of Government, Business and the International Community, Address to the National Business Leaders Forum on Sustainable Development, Parliament House, Canberra; 19 May 2008.

Table 1.1

Current environmental and sustainability requirements and guidelines

Policies	Requirements in summary
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	Section 516A of the Act specifies that agencies must include information about their performance on ecologically sustainable development and actions on the environment (including measures to minimise the impact on the environment) in their annual report.
Environmental Management Systems (2003)	Secretaries and agency Chief Executives were encouraged to implement an EMS by December 2002 and certify at least one of their largest sites by December 2003.
Government Vehicle Fleet Target (2003)	A target exists for Australian Government agencies to increase the proportion of vehicles in the top half of the Green Vehicle Guide to 28 per cent by 2005.
Energy Efficiency in Government Operations (EEGO) 2006	Energy intensity portfolio targets by 2011–12 of 7 500 (MJ)/person/annum for office tenant light and power; and 400 J/m ² /annum for office central services. The Defence and Environment Portfolios also have specific requirements. Agencies are to achieve minimum energy performance standards generally 4.5 stars (NABERS Energy or equivalent scheme) for new buildings, major refurbishments and new leases over 2 000m. ²
National Packing Covenant (NPC) 2006–07	The NPC is a voluntary arrangement between Australian and State/Territory Governments and industry that aims to minimise the environmental impacts of consumer packaging waste throughout the life cycle of consumer products. Australian Government commitments to the NPC were set out in the NPC Action Plan for 2006 to 2008. (Currently being updated)
Guidance	Summary
Environmental Purchasing Guide (2003)	The Guide introduces the principles of environmental purchasing, links these to Government policies and provides advice on getting environmental purchasing started in an organisation. Checklists that provide assistance specific to key types of goods and services purchased by the Australian Government accompany the Guide.
Water Efficiency Guide: Office and Public Buildings (2006)	This publication has two parts. The first part is the Water Efficiency Guide: Office and Public Buildings. These guidelines provide an introduction to the technical and behavioural opportunities that exist in office and public buildings for reducing water consumption and increasing water reuse. The second part of the publication is the national water intensity benchmarks for office and public buildings.
ESD Design Guide: Offices and Public Buildings (2007)	This guide provides an introduction to the key environmental issues relevant to office and public buildings. It also outlines what can be done to address these issues in building projects. Case studies of leading buildings are included.

Source: Department of the Environment, Water, Heritage and the Arts

State and international experiences from recent audits

1.10 The greening of government operations has been a feature of Australian state governments and internationally, particularly in the United Kingdom and in Canada. The ANAO reviewed a number of audits covering this work. The following examples illustrate the challenges, lessons learned and progress being made in sustainable development in public sector agencies in these jurisdictions.

Audit Office of New South Wales

1.11 In June 2008, the New South Wales (NSW) Audit Office completed an audit of the Waste Reduction and Purchasing Policy (WRAPP). This policy was introduced in September 1997 to encourage NSW Government agencies to minimise waste generation and reduce the volume of waste going to landfill. The policy required each government agency to minimise, reuse and recycle generated wastes and to give priority to buying materials with recycled content, where they were cost and performance competitive. WRAPP was regarded as being the first of its kind in Australia. The NSW Audit Office commented that the WRAPP initiative had achieved its intended outcome. The proportion of waste going to landfill over the last six years had decreased from 27 per cent to eight per cent. The public sector had also increased its use of recycled content materials.¹⁷

Commissioner for Environmental Sustainability, Victoria

1.12 In January 2008, the Commissioner for Environmental Sustainability in Victoria completed a *Strategic Audit of Victorian Government Agencies Environmental Management Systems (EMS)*. The report provided an assessment of Government performance in reducing the environmental impact of its operations, through its office-based environmental management programs. The report commented that, over the four years since the initiation of the Government's EMS program, significant effort had been invested by all agencies to further develop their EMSs and improve environmental performance. Over the past 12 months, agencies reported encouraging results. Water consumption and paper use per fulltime equivalent person (FTE) had reduced by 21 per cent and seven per cent respectively.¹⁸

1.13 There was also a reported 13 per cent reduction in the waste produced per FTE and good performance in the energy use per square metre of office space with a reported nine per cent reduction. A small increase was reported over the past 12 months in greenhouse gas emissions associated with agency vehicle fleets. The report also noted limitations in terms of the availability of trend data, limited reporting against targets, inconsistent methodologies and,

¹⁷ The Audit Office of New South Wales, *Performance Audit: Recycling and Reuse of Waste by the NSW Public Sector*, 2008, p. 3.

¹⁸ Commissioner for Environmental Sustainability Victoria, *Strategic Audit of Victorian Government Agencies' Environmental Management Systems*, January 2008, p. 3.

in some cases, un-representative data and non-compliance with the Government's financial reporting direction.¹⁹

National Audit Office of United Kingdom

1.14 In September 2005, the National Audit Office (NAO) completed an audit of Sustainable Procurement in Central Government. The United Kingdom's sustainable development strategy defines sustainable procurement as embedding sustainable development considerations into spending and investment decisions.²⁰ At that time, government departments and their executive agencies spent some £15 billion each year on the procurement of goods and services. Through this spending, departments were to support the Government's ambitious goal of being recognised as a leader in sustainable procurement across European Union member states by 2009. The NAO found that most departments were making progress. Most departments had developed high level processes to promote sustainable procurement, including environmental purchasing policies and commitment to follow guidance on environmental issues in purchasing. However, at the operational level, there was often a gap between high level commitment and practice. The NAO commented that more work was needed to ensure that sustainability was integrated into departmental procurement processes.

1.15 In April 2007, the NAO completed an audit that examined the extent to which departments and executive agencies had met sustainability targets for new buildings and major refurbishments. Each year, departments and agencies spend in the region of £3 billion on these projects. The NAO commented that if sustainability is handled well, it can and should provide better value for money in the long term. The NAO found that, while the government has set sustainability standards for the construction and refurbishment of buildings on the government estate, these had not been met. Departments had failed to carry out environmental assessments and achieve the target ratings. In particular, performance against the targets set for carbon emissions, energy and water consumption was found to be poor.²¹

¹⁹ op cit., p.3.

²⁰ National Audit Office, *Sustainable procurement in central government*, September 2005, pp 1-2.

²¹ National Audit Office, *Building for the future: Sustainable construction and refurbishment on the government estate*, April 2007, p. 4.

Office of the Commissioner of the Environment and Sustainable Development of Canada

1.16 In March 2008, the Commissioner of the Environment and Sustainable Development issued a status report on the Greening of Government Operations. Greening government procurement has been a Canadian Government priority since the Code of Environmental Stewardship²² was introduced in 1992. The report commented that the government was making satisfactory progress and concluded that after more than 15 years, the government had taken initial steps to green its operations but had a long way to go.²³

Audit objective, scope and methodology

1.17 The objective of this audit was to assess and report on the progress being made by Australian Government agencies in achieving better practice in green office procurement and sustainable office management. The scope of the audit included agencies subject to the FMA Act as well as a sample of bodies subject to the CAC Act. Sixty-six agencies were selected for this audit. However, because of the absence of separate data for new agencies following the change in Administrative Arrangement Orders in December 2007, some agencies were only able to provide data based on their previous administrative structure. Those agencies combining their data were;

- The Department of the Environment, Water, Heritage and the Arts and the Department of Climate Change; and
- The Department of Innovation, Industry, Science and Research and the Department of Resources, Energy and Tourism.

1.18 Changes to the former Department of Education, Science and Training and the Department of Employment and Workplace Relations also meant that approximate data was reported for the new department's current administrative structure. In addition, the data sets for the Department of Defence and the Defence Materiel Organisation were also combined because of their functional integration despite a structural reorganisation prior to 2007.

²² Environmental stewardship is the responsibility to take care of our natural resources to ensure that they are sustainably managed for current and future generations. Stewardship of the environment can include recycling, conservation, regeneration and restoration.

²³ Office of the Auditor General of Canada, *Status Report of the Commissioner of the Environment and Sustainable Development to the House of Commons*, March 2008.

The audit also sought to cover a range of agencies by size that included a typology based on a four tiered structure as outlined in Table 1.2.

Table 1.2

Typology of agencies included in the audit

Agency typology	FTE	Agencies
Very large agencies	over 20 000	Three agencies Department of Defence, Australian Taxation Office and Centrelink
Large agencies	1 000 – 19 999	25 agencies
Medium	250 – 999	25 agencies
Small	100 – 249	13 agencies

Source: ANAO analysis based on Australian Public Service Commission data based on full time equivalent staff numbers 2006–07

The full list of agencies included in the audit survey is set out in Appendix 3.

Methodology

1.19 A survey methodology was adopted. The survey sought to gauge the level and type of practice in place in agencies, relevant to sustainable practices in areas such as:

- policies and procedures underpinning sustainable practices;
- higher value office consumables such as paper, vehicles and information, communications and technology;
- water and waste management;
- energy use;
- office building design and refurbishment; and
- sustainability reporting.

1.20 Agencies were required to provide supporting evidence to substantiate claims made in the survey. The ANAO also checked any anomalies and outlier responses. In addition, the ANAO conducted more detailed validation work in a stratified sample of nine agencies as a quality control and to test the accuracy and consistency of responses across agencies. The nine agencies selected were designed to cover the four tiers of agencies (that is, very large, large, medium and small). The nine agencies selected for more detailed validation are set out in Table 1.3.

Table 1.3

Agencies selected for validation

Agency typology	Agencies
Very large agencies	The Department of Defence, the Australian Taxation Office and Centrelink
Large agencies	Airservices Australia, Medicare Australia and the Department of Families, Housing and Community Services and Indigenous Affairs
Medium	AusAID and Comcare
Small	National Gallery of Australia

Source: ANAO

1.21 In addition to the survey, the ANAO relied on the data held by the Department of the Environment, Water, Heritage and the Arts (Environment) (for the annual report of *Energy Use in Australian Government's Operations*) and the Department of Finance and Deregulation (Fleet Monitoring Body) for motor vehicles. In relation to the analysis of annual reports, the ANAO relied on the actual annual reports prepared by 65 agencies for 2006–07 and a sample of nine from 2007–08. Consultation with relevant State agencies such as Sustainability Victoria and the NSW Department of Environment and Climate Change as well as with building owners also assisted the ANAO in gaining a broader understanding of the practical issues and current challenges in implementing sustainable development.

Audit conduct

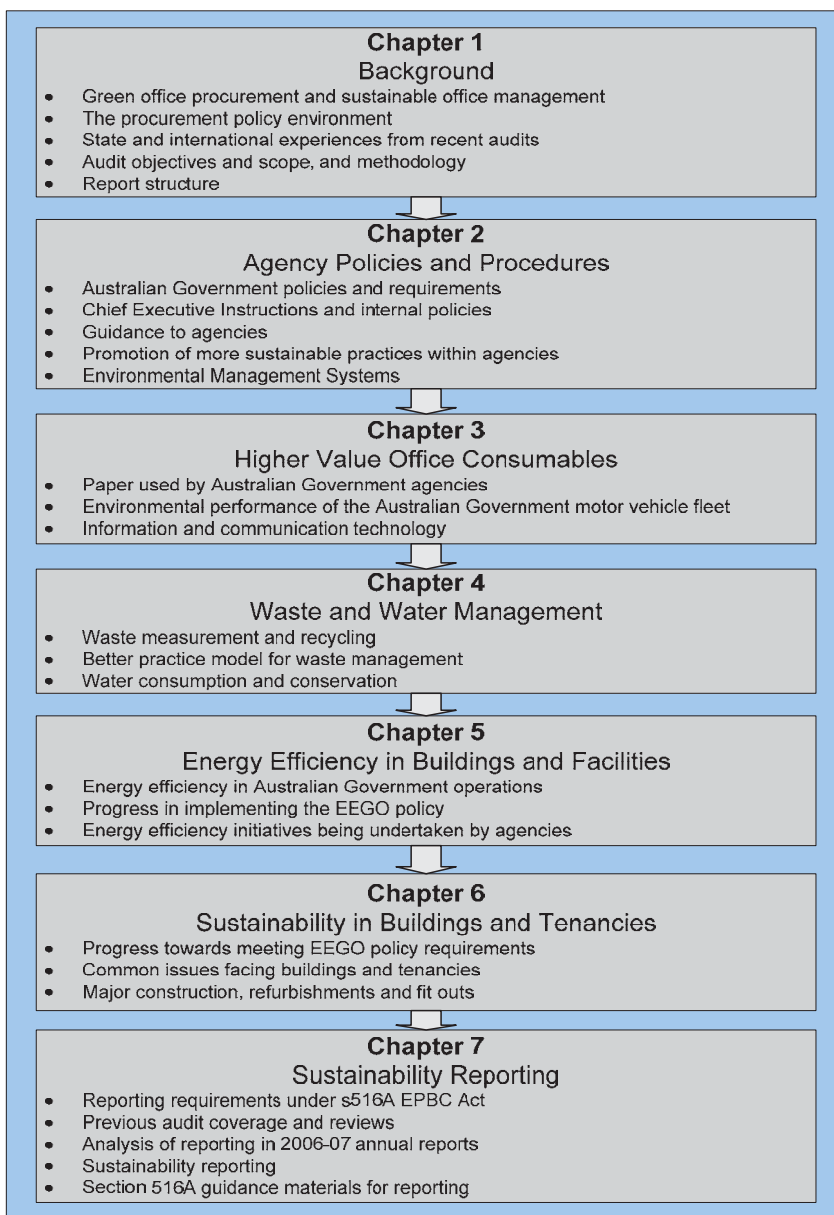
1.22 The audit was conducted in accordance with ANAO Auditing Standards. The audit commenced in February 2008 and the bulk of the fieldwork was conducted between March and August 2008. The total cost of the audit was \$470 000.

Report structure

1.23 The structure of the report is outlined in Figure 1.2.

Figure 1.2

Structure of the report by chapter



2. Agency policies and procedures

This chapter provides an overview of the primary controls used in environmental management. Australian Government policies and requirements, Chief Executive Instructions, internal policies and guidance to agencies are covered. The promotion of more sustainable practices within agencies and the progress being made in implementing environmental management systems is also discussed.

Australian Government policies and requirements

2.1 The 2005 audit recommended that Environment strengthen the sustainability framework of the Australian Government in order to achieve better procurement practices.²⁴ The audit recommended the adoption of a strategic approach, with updated policies, performance targets, and a comprehensive measurement and reporting regime.

2.2 As noted in the previous Chapter, the Government established a taskforce to examine options to improve the sustainability of Australian Government operations in March 2008. The Taskforce on Government Leadership in Sustainability has progressed in parallel to the ANAO audit. The audit findings and recommendations will provide the Taskforce and the Government with issues for consideration in strengthening leadership and performance in sustainability. However, at the time of the audit, there had been no significant change in policy requirements and the gaps apparent in 2005 remain significant constraints in 2008.

Chief Executive Instructions and internal policies

2.3 Chief Executive Instructions (CEIs) and internal policies explain the goals and policies of an agency. The ANAO's 2005 audit recommended that agencies' CEIs and internal policies outline all necessary requirements for environmental and whole-of-life cycle assessments in the procurement of goods and services.²⁵

2.4 The 2008 ANAO survey responses indicated that there was an improvement in the extent to which agencies included environmental

²⁴ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation 16, p.129.

²⁵ *ibid.*, Recommendation 1, p.52.

considerations in their CEIs and internal policies. The results are outlined in Table 2.1.

Table 2.1

Comparison of agency CEIs and internal policies in 2005 and 2008

Matters explicitly stated in CEIs and internal policies	ANAO survey 2005	ANAO survey 2008
	Per cent of agencies	Per cent of agencies
Whole-of-life cycle costing	50	75
Value for money	92	94
Minimising environmental impacts	42	56
Compliance with Australian Government legislation, policies and targets	48	65
Environmental management system	Q not asked	40
Buy recycled products	Q not asked	25

Source: ANAO survey responses

2.5 While an improvement was noted in all areas of comparison, the depth and quality of the CEIs and related guidance documents reviewed by the ANAO, varied significantly. Of the 24 agencies that provided copies of their CEIs, over half provided extensive guidance and checklists to their staff, while a third provided very little or no elaboration apart from referencing compliance requirements and policies in their CEIs. Approximately a quarter of agencies explicitly stated their commitment to more sustainable practices. Centrelink demonstrated good practice in this area. Recognising that it has a 'large environmental footprint' as a 'very large consumer of materials and energy.' An extract from the Centrelink's CEI is outlined in Figure 2.1.

Figure 2.1

Centrelink's environmental management commitment

'Centrelink will continually improve its business performance and conduct its operations in an environmentally responsible manner, clearly reflecting a commitment to fostering the sustainable use of the Earth's resources. Centrelink will also implement and maintain an Environmental Management System to ISO 14001 requirements. We will:

- comply with all relevant environmental legislation and regulations, and other initiatives to which we subscribe;
- incorporate environmental better practice into our core business plans and management processes;
- minimise negative impacts we may have on the environment, through efficient use of resources, and reduction in emissions and waste;
- develop an agency-wide framework for setting and reviewing our environmental objectives and targets, which will include key environmental management and performance indicators against aspects of Centrelink's operations;
- provide regular monitoring and reporting against these indicators to all staff;
- incorporate environmental better practice into all technological solutions, and the fit-out and operation of accommodation;
- ensure we work closely with our clients, suppliers, local communities, and other interested parties to continually improve our processes in environmental better practice; and
- foster the initiation and ownership of environmental activities by all our staff, thereby inculcating a strong environmentally aware business culture.'

Source: Centrelink, Environmental Management Policy Statement; 2005

2.6 The Australian Communications and Media Authority (ACMA) also demonstrated good practice in relation to sustainability controls for contractors. This is illustrated in the extract from ACMA's CEI outlined in Figure 2.2.

Figure 2.2

ACMA – avoiding or minimising damage to the environment when engaging contractors

'The Contractor will cooperate with ACMA in ensuring that the Services are supplied in a manner, which avoids or minimises damage to the environment. ... damage to the environment includes any reduction in the quality, productivity and amenity of the land, waters or air on or off an ACMA location and any threat to the sustainability of any animal, plant or other biological species.

The Contractor must not, in providing the Services, use any substance which is proscribed by the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*, without the prior written consent of the Project Officer. The Commonwealth may reject services offered by the Contractor for the benefit of ACMA using an ozone-depleting substance.

When carrying out work in performance of this Contract at ACMA locations, the Contractor is required to:

- comply with ACMA's energy, recycling, and waste management policy guidelines, copies of such guidelines to be provided to the Contractor;
- participate in, and actively support, any existing or new energy efficiency improvement programs which relate to the scope of activities covered by this Contract; and
- use energy and office resources efficiently at all times in carrying out such work.'

Source: ACMA, Chief Executive Instructions, 2008

2.7 While these examples are pertinent to the particular business environment and circumstances of each agency, they also provide practical illustrations of what may have broader applicability across the public service. Agencies may wish to consider these examples within the context of their own environmental performance and when revising their CEIs.

Guidance to agencies

2.8 In 2005, the ANAO identified shortcomings in the accessibility and quality of the guidance provided to agencies on green procurement. The 2005 audit recommended that the then Department of the Environment and the then Department of Finance, improve accessibility for agencies and provide better information. In particular, electronic access, whole-of-life cycle assessments in procurement and ensuring that all information is regularly updated and supported with better practice examples.²⁶

2.9 The 2008 ANAO survey responses identified that 95 per cent of agencies stated that they found the Department of the Environment, Water, Heritage and the Arts' (Environment) website on sustainability in government

²⁶ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 2, p.53.

to be of use. Responses included *somewhat useful* - 37 agencies; *useful* - 22 agencies; *very useful* - one agency. This is an improvement on the 2005 survey results where 27 per cent of agencies did not find the website guidance useful. Survey responses to particular publications available from the Environment website and other online guidance materials are outlined in Table 2.2.

Table 2.2

Green procurement and environmental management material used by agencies as a source of information

Publication	ANAO survey 2005			ANAO survey 2008		
	Not used	Used to some extent	Extensively used	Not used	Used to some extent	Extensively used
Per cent of agencies						
Green Office Guide (2001)	41	56	3	26	72	2
ANAO Life Cycle Costing Better Practice Guide (December 2001)	45	53	2	40	52	8
Environmental Purchasing Guide (2003) and checklists	48	50	2	38	60	2
National Government waste reduction and purchasing guidelines (2004)	52	45	3	45	55	0
Department of Finance and Deregulation Guidance on Complying with Legislation and Government Policy in Procurement (2005)	13	55	32	6	57	37
National Packaging Covenant - Australian Government Action Plan (July 2006 – June 2008)	Q not asked			37	63	0
Water Efficiency Guide (2007)	Q not asked			62	36	2

Source: ANAO survey 2005 and 2008.

Green procurement and environmental management material used by agencies as a source of information

2.10 Nevertheless, many of the improvements suggested in the 2005 survey responses were raised again in the 2008 responses. Comments included:

- materials relating to green procurement need to be consolidated, with preferably one agency having stewardship;
- central access point is needed for materials related to green procurement;
- new material and updates to material (through email alerts, workshops or presentations) could be better disseminated;
- information should be kept up to date and new products added to the Environmental Purchasing Guide and checklists, ensuring they refer to the most current rating systems available²⁷; and
- contract and tender clauses and assessment weightings for environmental performance should be shared amongst agencies.

2.11 In 2006, a Government Agency Environment Network (GAEN) was established to 'drive environmental performance improvements within public agencies.' The network aims are to 'share best practice ideas on environmental management, initiate best practice activities for public agencies and facilitate uptake of ideas within agencies.' GAEN has also conducted research into strategic issues in sustainability. For example, sub-groups have been formed to examine green leases, environmental management systems, data management and green travel. At the time of the audit, some 30 agencies were members of GAEN. The ANAO attended GAEN meetings during the course of the audit and observed that this group is assisting to accelerate the dissemination of innovation and good practice throughout the public sector. In September 2008, (subsequent to the ANAO survey responses), Environment improved and updated its website to provide better access for agencies seeking information on sustainability issues.

2.12 From discussions with agencies during the course of the audit, the concerns raised by individual agencies in their survey responses reflect, at least in part, an inability of Environment to meet the growing expectations of agencies that it will provide relevant and up to date better practice information on all key aspects of sustainability. However, the ANAO has observed that GAEN has filled this gap in sustainability leadership. Larger agencies such as Centrelink, the Department of Defence (Defence) and the Australian Taxation

²⁷ For example, the waste reduction objectives on the Environment website relate to agencies achieving a 50 per cent reduction in waste to landfill by 2000. However, there is no updated information detailing whether the objectives were achieved and whether new targets (if any) were set.

Office (ATO) have all taken a leadership role in this area. Environment has taken the lead in energy efficiency and is comparatively well positioned to provide advice to other agencies. While recognising the contributions of these agencies, there is a strong case for Environment to take a more active leadership and coordination role in relation to more sustainable procurement practices. The extent to which the department is able to do this will, in large measure, be influenced by internal priorities and resources.

Promotion of more sustainable practices within agencies

2.13 In responding to the ANAO survey, a number of agencies commented that they actively promote more sustainable practices through measures such as environmental awards. The ATO and Defence run annual Environment Awards to recognise initiatives that achieved positive environmental outcomes. The Departments of Defence and the Prime Minister and Cabinet also provided examples of their signage to promote more sustainable behavioural practices. This is illustrated in Figure 2.3.

Figure 2.3

Signage from the Department of the Prime Minister and Cabinet and the Department of Defence



Source: Department of the Prime Minister and Cabinet and the Department of Defence

2.14 Agencies were also encouraged to participate in the promotion of more sustainable energy conservation through the Earth Hour international awareness rising initiative. Participants were required to turn off all

unnecessary lights and appliances for one hour. In March 2008, 110 Australian Government agencies (96.5 per cent)²⁸ registered with Environment to participate in the event. These agencies covered 2 221 buildings nationwide with a floor area of over 3.7 million square meters.

Environmental management systems

2.15 An environmental management system (EMS) is a framework of cohesive management elements that an organisation may use to provide information on and set priorities for minimising its impact on the environment. ISO 14001²⁹ is an internationally accepted specification for an EMS. It specifies requirements for:

- establishing an environmental policy;
- determining environmental impacts of products and activities;
- planning environmental objectives; and
- measurable targets, implementation of programs and management review.

2.16 The Government's policy has not changed since the ANAO audit in 2005. The development of an EMS remains discretionary and agencies were 'encouraged' to adopt an EMS based on ISO 14001 for at least one of their larger sites by December 2003. Agencies were to report to their Minister if there were particular circumstances preventing implementation, such as the cost of actions significantly outweighing the benefits. The 2005 audit found shortcomings in the voluntary implementation of an EMS by agencies and reporting to their Minister. The audit recommended that agencies give further consideration to implementing an accredited EMS in at least one of their larger sites.³⁰

²⁸ Four agencies did not register in Earth Hour in 2008 - Australian Electoral Commission, Food Standards Australia New Zealand, Office of the Privacy Commissioner and Human Rights and Equal Opportunity Commission.

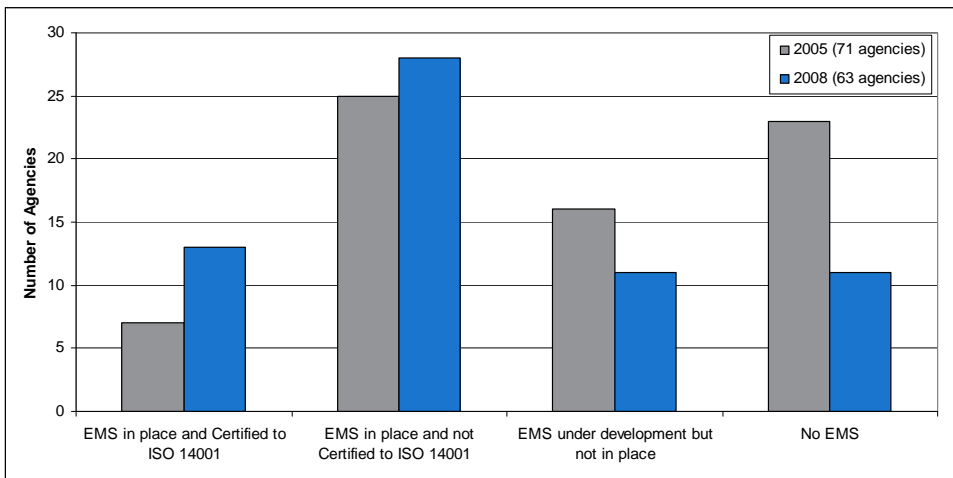
²⁹ These standards are developed by the International Organization for Standardization. ISO 14000 family addresses environmental management. This means what the organisation does to minimise harmful effects on the environment caused by its activities, and to achieve continual improvement of its environmental performance.

³⁰ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 3, p.57.

2.17 From the 2008 survey, agencies owned or leased 3 790 sites within Australia.³¹ The survey indicated that the number of agencies with an EMS certified to ISO 14001 increased from the seven in 2005 to 13 in 2008; those with an EMS in place without ISO 14001 certification, also increased from 25 to 27 over the same period and the total number of sites with an EMS was 1 758 (approximately 46 per cent). Figure 2.4 illustrates the changes in EMS implementation across agencies from 2005 to 2008.

Figure 2.4

Environmental management systems in place 2005 and 2008



Source: ANAO survey of Australian Government agencies in 2005 and 2008

2.18 Those agencies without an EMS tend to be smaller such as the National Gallery and the Australian Crime Commission. However, medium sized agencies such as the Department of Agriculture, Fisheries and Forestry, the Attorney-General’s Department and the Department of Veteran’s Affairs have also not implemented an EMS. Even agencies within the Environment Portfolio such as the Bureau of Meteorology have yet to develop an EMS within their organisation.

2.19 Agencies with an EMS have provided a range of comments regarding their effectiveness in managing environmental impacts. Agencies such as Centrelink and Medicare Australia were able to quantify some of the benefits arising from the implementation of their EMS. Centrelink commented that:

³¹ These sites include both occupied and un-occupied sites.

Since implementation of the corporate EMS, Centrelink's environmental performance has improved in all areas covered by Centrelink's Environmental Management Programs. For example, Centrelink's energy use has decreased by approximately two per cent per annum.³²

2.20 Medicare Australia also commented in its Environmental Sustainability Report that it had built national and international environmental standards into its management and business practices and in doing so, had achieved associated cost savings.

2.21 In other agencies, the absence of quantifiable targets within the EMS has limited reporting on results. This highlights the importance of having a well designed EMS, regardless of the standard adopted. In 2005, the ANAO recommended that agencies implement challenging but realistic targets as part of the design and implementation of their EMS.³³ However, the 2008 survey results revealed that, although some progress has been made since 2005, the number of agencies without targets remains high, as seen in Table 2.3.

Table 2.3

Agencies with targets within their EMS in 2005 and 2008

Targets in EMS	Per cent of agencies with targets (2005)	Per cent of agencies with targets (2008)
Energy	41	51
Paper	34	29
Vehicles	30	37
Waste	28	32
Water	20	22
<i>No targets</i>	49	43

Source: ANAO surveys of Australian Government agencies in 2005 and 2008

2.22 Given the expansion in EMS coverage of Australian Government sites since the last audit, it is clear that agencies are aware of the potential benefits of an EMS. The challenge is more about improving the quality and consistency of the systems in agencies. Good practice noted during the course of the audit was primarily identified in agencies that had quantifiable targets and actions.

³² Centrelink, ANAO Survey Response, 2008.

³³ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 4, p.60.

For example, the Australian Broadcasting Corporation has a framework that includes quantifiable objectives, annual targets and key individual actions as illustrated in Table 2.4.

Table 2.4

Australian Broadcasting Corporation; environmental targets and objectives

Longer term objective	Annual Target	Individual Actions
Reduce greenhouse gas emissions by 40 per cent by 2020 and 60 per cent by 2050 (from 1997 base year)	Reduce overall energy consumption by 1 per cent per annum nationally.	Power off strategies for computers and equipment Increase efficiency of building plant and equipment

Source: Australian Broadcasting Corporation, Environmental Targets and Objectives, 2008

2.23 Airservices Australia also provided documentation to illustrate its progress towards good practice in this area. Airservices policy is to ‘target significant greenhouse gas emissions reductions from current levels by 2012 with cumulative targets set for each year for the next five years’. Actions being developed include the installation of electricity meters to record usage, establishing a dedicated resource management monitoring and reporting system at key sites and determining the current emissions footprint for key sites. In the longer term, Airservices plans to have an emissions footprint for every site and achieve carbon neutrality throughout their supply chain.

2.24 Quantifiable objectives and targets provide a clear measure of expectations. However, it is important that they are challenging but realistic and that they are not defined arbitrarily. Agencies need to consider their own performance and circumstances against comparable standards of best practice. For many agencies, particularly smaller agencies or those that do not have sites accredited under ISO 14001, this may not be available. There is currently no EMS template with minimum standards or attributes for Australian Government agencies. The lack of minimum standards has not been conducive to effective or consistent environmental performance across agencies. Agencies have little whole-of-government guidance as to the resource commitment required or the minimum standard of performance expected. It is also one of the reasons why there is such a wide range of performances across agencies.

2.25 The GAEN has a sub-group chaired by Defence, which is examining the further development of environmental management systems. In particular, the GAEN plans to develop guidance in relation to:

- EMS integration within business processes;

- an EMS checklist;
- certification and alternatives to accreditation;
- continuous improvement; and
- objectives/ targets for EMS.

2.26 This approach is intended to be integrated with the work being undertaken within Environment to develop a new model EMS. The model is being developed on the current ISO 14001:2004 standard and should enable Australian Government agencies to establish, implement and maintain a simple EMS that is appropriate for office-based operations. It is expected to include templates and examples of various EMS documents as well as guidance notes and a training guide for establishing and implementing an EMS. The model is based on the practical experiences and lessons learned from agencies that have been using environmental management systems for many years. It is proposed that a draft of the model will be circulated to GAEN members and the final version made publicly available on Environment's website by early 2009. Because the model is not yet complete, the ANAO is not able to provide an opinion on the final product. However, the process used and the preliminary specifications outlined to the ANAO suggest that the final product should be relevant to Australian Government agencies.

Conclusion

2.27 Guidance and promotion of good practice in sustainability has improved since 2005 and there is now more information available to agencies seeking to improve the sustainability of their practices. However, an environmental management system is the foundation of an agency's environmental management controls. Without a well designed system in place across agencies, the Australia Government cannot demonstrate leadership in sustainability.

Recommendation No.1

2.28 To strengthen the quality and consistency of environmental management systems, the ANAO recommends that agencies (where they have not already done so), ensure that their system has quantifiable objectives that reflect better practice as well as both short and longer term sustainability goals.

Agencies' responses

2.29 All agencies agreed to or were supportive of this recommendation.

3. Higher Value Office Consumables

This chapter examines the performance of agencies in minimising the environmental impacts of office consumables, particularly paper, motor vehicles and information and communications technology.

Introduction

3.1 The use of paper and information and communication technology (ICT), is common to most office environments. They are used in relatively large quantities and can have significant environmental, and often financial, impacts during their lifecycle. As recommended in the 2005 audit, the bulk purchase of these items may also allow agencies to develop policies to reduce environmental impacts and unnecessary costs.³⁴ Motor vehicles are also a common feature in most agencies and have significant environmental and financial impacts.

Paper used by Australian Government agencies

3.2 The Australian Government is a significant user of office paper, with surveyed agencies reporting an aggregate use of over 6 500 tonnes per year³⁵ From the survey data, the average number of reams of paper used per person per year was 18.6 reams. Notably, the highest users (on a per person basis) were smaller agencies, with the top six paper users per person each having less than 600 staff, and the top three less than 200 staff. The three largest agencies (Centrelink, Defence and Australian Taxation Office (ATO)) were the highest volume paper users, accounting for 57 per cent of paper use reported in the survey. A reason for higher per capita use in smaller agencies is that these agencies do not have the electronic document management systems that are available in larger agencies. This finding is consistent with the survey results, which showed the average size of agencies with electronic records management systems was 3282 staff while the average size of those without such systems was 1108 staff.

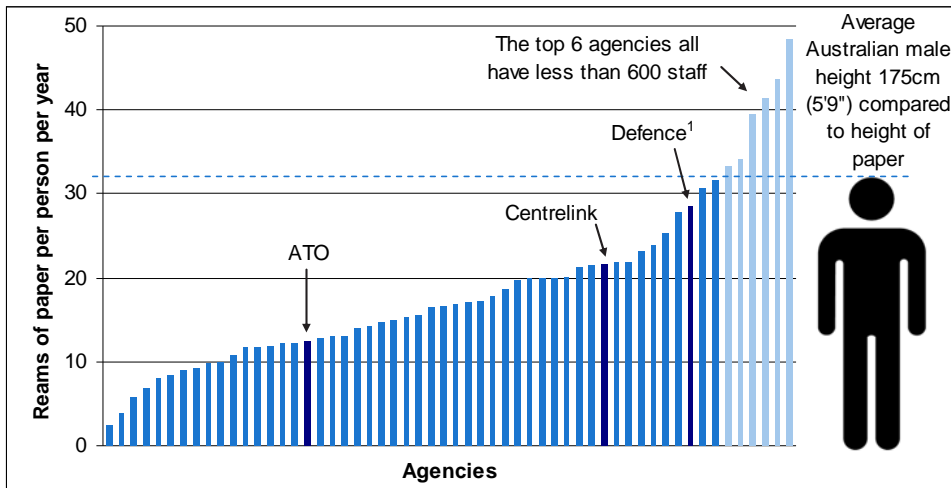
³⁴ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 5, p. 70.

³⁵ This figure was calculated from surveyed agencies and does not include external printing.

3.3 Figure 3.1 shows the range of paper consumption within the agencies surveyed by the ANAO, ranging from only two and a half reams to almost fifty reams per person per annum.

Figure 3.1

Paper use per person, with top three agencies on aggregate paper use



Note 1: This figure counts only Defence APS staff. If all Defence full time staff (including operational staff, excluding reserves) are counted the figure drops to 9.5 reams per person

Source: ANAO 2008 survey responses

Increasing use of recycled content paper

3.4 Recycled paper can, in its manufacture, use up to 90 per cent less water and 50 per cent less energy than virgin paper.³⁶ Since the previous audit in 2005, the proportion of agencies using paper with recycled content has increased from 43 to 71 per cent. The increased use of recycled paper is consistent with the Government's objectives for the National Packaging Covenant³⁷, which aims to encourage the recycling industry.

3.5 Figure 3.2 identifies the number of surveyed agencies using paper with different proportions of recycled content, ranging from zero recycled content

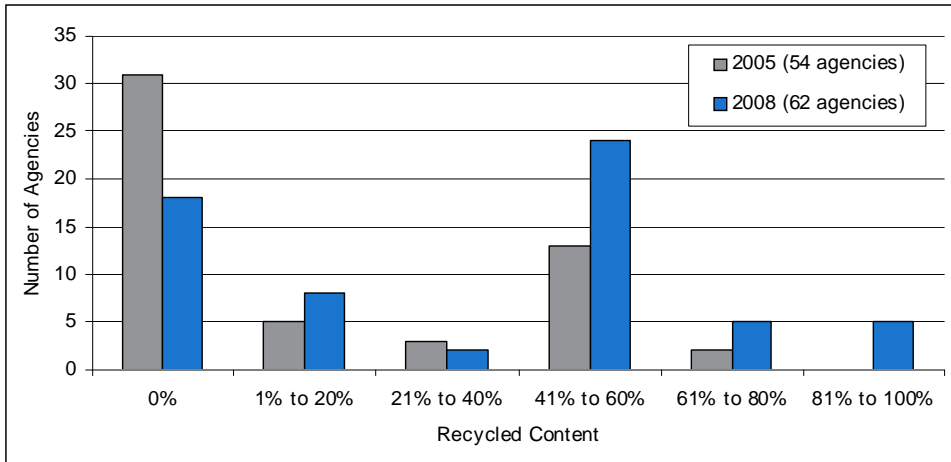
³⁶ National Appliance and Equipment Energy Efficiency Committee, *Green Office Guide*, 2001, Melbourne, p. 8.

³⁷ The National Packaging Covenant is a voluntary agreement between Australian Governments and the packaging industry to reduce the environmental impacts of post consumer packaging through measures including encouraging recycling.

(virgin pulp source) to 100 per cent. The results of the ANAO's 2008 survey are also compared with the earlier 2005 survey.

Figure 3.2

Recycled content of office paper used by agencies



Source: ANAO surveys 2005 and 2008

3.6 The average recycled content reported by agencies was 34.9 per cent (up from 19.3 per cent in 2005). The weighted average for recycled content being slightly higher at 36.6 per cent (up from nine per cent in 2005). This significant increase was influenced by two of the three largest paper consumers, (Centrelink and the ATO) changing from virgin paper to 50 per cent recycled content paper since 2005.

Decreasing cost of virgin and recycled content paper

3.7 The average price paid per ream of standard copy paper by surveyed agencies has decreased by about ten per cent since the 2005 audit. Consistent with the previous audit, the 2008 survey data indicated that the price of paper tends to increase as recycled content increases.

3.8 In 2008, the cost of a ream of 50 per cent recycled content paper is approximately the same as a ream of virgin paper in 2005. This has meant that, as the price of recycled content paper has dropped, agencies have been able to use more environmentally friendly alternatives at a similar cost. Purchasing

clusters, as recommended in the ANAO's 2005 audit³⁸, tended to be adopted at the portfolio level. For instance, agencies within the Human Services Portfolio such as Centrelink and Medicare participate in a joint purchasing arrangement for office paper.

Barriers to using recycled content paper

3.9 Responses to the ANAO survey indicated that the main issues preventing agencies using higher content recycled paper were:

- cost (48 per cent);
- compatibility with printers/copiers/multi-function devices (MFDs) (40 per cent); and
- not suitable for archival requirements (five per cent).

3.10 Some agencies cited perceptions from staff that recycled paper can cause paper jams or is of lesser quality. The five agencies that used 100 per cent recycled paper, along with two others that have trialled it, indicated they have not encountered any compatibility issues. While it is not possible to be definitive in terms of the concerns raised by agencies about recycled paper, comments from agencies tend to suggest that these are linked to historical experiences and using recycled paper in older printers or printers that may not be compatible with the paper purchased.

3.11 Figure 3.3 illustrates that, although cost is a consideration when procuring higher recycled content paper, it does not necessarily have to be a barrier to using the better environmental option.

³⁸ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 5, p.70.

Figure 3.3

Choosing higher recycled content paper

Each year, the Department of Parliamentary Services (DPS) uses over 8 000 reams of A4 paper. Under our current contract we pay a very good price, but the paper is 100 per cent virgin fibres—no recycled content at all.

We have just finished evaluating suppliers for a replacement paper contract where we faced a choice of paper with 0 per cent, 50 per cent or 100 per cent recycled content. No recycled content was the cheapest, while 100 per cent was the dearest.

The DPS financial outlook is such that we can ill afford increases to any of our consumable costs, and going with the 100 per cent recycled option would add nearly \$10 000 or about 27 per cent to the bill, assuming our use remains at last year's levels. And there is the challenge. We have decided to go with the best environmental option—wholly recycled A4 paper.

To offset the increased cost, DPS needs to decrease printer and copier consumption to around 6 300 reams per year, down 21 per cent from the 8 000 we currently use.

Double sided printing is good, but thinking twice before deciding you really need a (another) hardcopy, and printing selected pages rather than the whole document will also help.

We will keep track of paper consumption broadly over the next few months to see how, collectively, we are going.

Source: Extract from Department of Parliamentary Services Newsletter, Feb 2008

Steps taken to reduce office paper use

3.12 Reducing paper use is the first and most effective step agencies can take to reduce the environmental impact of paper use. Table 3.1 outlines the steps agencies advised they had taken to reduce paper use.

Table 3.1

Steps taken by agencies to reduce paper use

Steps taken	Number of agencies	Percentage of agencies
Procure only duplex capable printers, copiers and MFDs	46	73
Setting printers, copiers and MFDs to duplex printing as default	42	67
Electronic records management systems	41	65
None	3	5
Other	15	24

Source: ANAO 2008 survey responses

3.13 Duplex printing, or double sided printing, is a simple way for agencies to reduce paper consumption. The Environmental Purchasing Checklist for

printers³⁹ advises duplex capability should be the preferred option for procurement and machines set to default duplex upon installation. Seventy three per cent of agencies procure only duplex capable printers, copiers and multifunction devices (MFDs) while 67 per cent set duplex printing as default. In New South Wales, 98 per cent of agencies use double sided printing.⁴⁰ The ANAO considers setting printers to duplex as the default option is a simple and effective method of reducing paper consumption.

3.14 Other steps identified by agencies included the use of electronic media services. For example, the Attorney General's Department advised that, since November 2007 media clips have been produced online, reducing paper waste from the department by 40 per cent. The ATO uses electronic processing for all personnel transactions, requests electronic invoicing from suppliers and makes electronic payments wherever possible. Defence has also advised that it is implementing digitisation projects for medical, personnel and other records which, along with other steps, have contributed to a reduction in the number of pages printed from 86 million in 2006 to 75 million in 2007. The ANAO recognises that these initiatives may well have been introduced for other reasons. Nevertheless, they provide examples of steps towards better environmental outcomes.

External printing can exceed office paper use

3.15 External printing (that is, publications, pamphlets, forms and brochures) has the potential to have a much greater environmental impact than office printing. For example, Medicare Australia commented:

Medicare's internal copy paper consumption for 2007–08 is around 169 tonnes, compared to one of our government programs like the Pharmaceutical Benefits Scheme of 1480 tonnes of paper per annum. In Medicare's case, business paper well and truly overshadows internal copy paper.

3.16 Reducing the weight of paper used can be an effective method of reducing the amount of paper used, and the associated environmental and financial costs of production, transport and storage. Centrelink has reduced its paper use for all forms and marketing by 32 per cent, from 2 400 tonnes in

³⁹ Department of the Environment, Water, Heritage and the Arts, *Environmental Purchasing Checklist - printers, photocopiers and multi-function devices*, 2003.

⁴⁰ NSW Department of Environment and Climate Change, *Waste Reduction and Purchasing Policy (WRAPP) Progress Report 2008*, p. 8.

2006–07 to 1 600 tonnes in 2007–08. This reduction has been achieved through a mixture of reducing paper weight from 130 GSM to 115 GSM for the *Life Event Core Booklets* and better inventory management of printed stock. Centrelink has also implemented a range of service delivery measures to reduce paper use that has included SMS messaging, on-line and call centre services.

3.17 Thirty-eight per cent of agencies advised they use at least some recycled paper in their external printing. A small number of agencies also required ISO 14001 accreditation for their printers, environmental certification standard for their printing stock, or the use of plant based inks without heavy metals. These examples contrast with the 53 per cent of agencies that indicated they take no steps to reduce the environmental impacts of their external printing.

3.18 An effective way of ensuring that environmental considerations are included in printing procurement decisions is to include environmental performance clauses in printing tenders and contracts. The Department of Broadband Communications and the Digital Economy has developed environmental performance clauses for its external printing, which include the steps already mentioned along with requirements that printers retain digital records of publications for easy re-ordering, use minimal amounts of packaging and use packaging made from recycled materials.

Conclusion

3.19 Based on the 2008 survey responses, agencies have reduced their environmental impacts since 2005 by using higher recycled content paper. However, it is difficult to determine if overall paper use has changed, particularly considering that external paper use can exceed office use. Electronic storage and retrieval of information is becoming common place and beginning to show environmental and financial benefits for some agencies. Although one of the simplest methods of reducing paper use is to set duplex printing as the default option, many agencies still fail to do this. Agencies that have large external printing requirements can also reduce their environmental impact through the use of environmental requirements in printing contracts.

Environmental performance of the Australian Government motor vehicle fleet

3.20 An energy efficient vehicle fleet is a highly visible indicator of environmental awareness and responsibility. The Australian Government is a significant consumer of motor vehicles with the Government fleet and Defence white vehicle fleet⁴¹ combined having over 13 000 vehicles. The ANAO's 2005 audit recommended measures to encourage greater energy efficiency in vehicle leasing arrangements, set individual fleet energy efficiency targets and consider options to reduce greenhouse gas emissions.⁴²

3.21 Both the Government and Defence fleet contracts are managed by LeasePlan Australia, a private fleet management company. FMA Act agencies are required to lease vehicles through the Government fleet contract.⁴³ Since the 2005 audit, a number of CAC Act agencies have also opted-in to the contract, increasing the number of agencies covered by the contract from 70 in 2004–05 to 99 in March 2008. The size of the Government fleet has varied over time, dropping from 10 490 in June 1998 to a low of 7 232 in January 2006 and rising steadily to 8 392 in June 2008. The most common lease is for two years and 40 000 km, with the average being 27 months and 47 901 km, indicating the fleet is effectively renewed every two to three years.

3.22 The seven largest agency fleets make up just over half of the Australian Government vehicle fleet. Table 3.2 details the seven largest fleets across government agencies and the Defence white fleet.

⁴¹ The Defence white vehicle fleet consists of non-military, commercially available passenger and commercial vehicles.

⁴² ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendations No. 7 (p. 83) and Recommendation No. 8 (p. 85).

⁴³ Vehicles in the Government fleet are leased, while Defence maintains ownership of its white fleet vehicles.

Table 3.2**The seven largest Australian Government agency fleets and the Defence white fleet**

Agency	Fleet size	Per cent commercial vehicles ⁴⁴
Australian Federal Police	1 142	21.5
Centrelink	991	6.9
Department of Defence ⁴⁵	459	12.4
Australian Taxation Office	460	2.4
Australian Quarantine and Inspection Service	456	18.2
Australian Customs and Border Protection Service	377	37.7
Department of Families, Housing, Community Services and Indigenous Affairs	322	53.1
Total Government fleet	8 407	16.5
Defence white vehicle fleet	5 043	55.4
Total Australian Government owned fleet vehicles	13 450	31.1

Source: Fleet Monitoring Body and the Department of Defence

The Green Vehicle Guide

3.23 The Green Vehicle Guide (GVG) provides information about the environmental performance of new vehicles up to 3.5 tonnes gross vehicle mass sold in Australia. Vehicles are given a rating out of ten for their greenhouse emissions and an air pollution rating based on emission standards.⁴⁶ The two ratings are then added to give a rating out of 20. A vehicle is in the top half of the GVG if it scores 10.5 or higher. In February 2003, the Government set a target to have 28 per cent of (non-Defence) Government fleet vehicles scoring in the top half of the GVG by December 2005. Although the guide is maintained by the Department of Infrastructure, Transport, Regional

⁴⁴ As defined by the manufacturer. Typically vans, utilities, 4WDs and trucks.

⁴⁵ The Department of Defence leases some vehicles through the whole of government fleet contract in addition to its white vehicle fleet.

⁴⁶ Department of Infrastructure, Transport, Regional Development and Local Government, *Information on Green Vehicle Guide Ratings and Measurement*, available from <http://www.greenvehicleguide.gov.au/GVGPublicUI/StaticContent/ratings.aspx> [accessed 26 November 2008].

Development and Local Government, the target of 28 per cent was set by Environment.

Meeting the GVG target

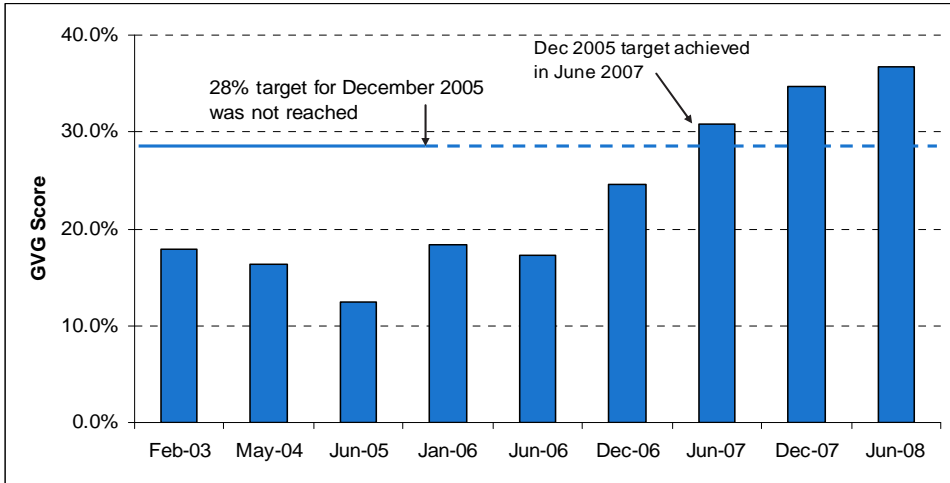
3.24 When originally set, it was also noted that the target could be achieved without additional cost or affecting the executive vehicle scheme⁴⁷ or fit for purpose vehicles. The gains coming from general pool vehicles would be sufficient to achieve the target. The target was voluntary and, although individual agencies were expected to contribute, no individual agency targets were set. The target was not met within the planned timeframe, but was achieved 18 months later in June 2007, as indicated in Figure 3.4. The proportion of vehicles in the top half of the GVG in June 2008 was 36 per cent. The target was reviewed by the Government Leadership in Sustainability Taskforce⁴⁸ in late 2008 and a revised target has been proposed to Ministers to achieve more sustainable and cost effective vehicle fleets. At the date of preparation of this report, there has been no decision to update the target or revise the guidelines.

⁴⁷ The executive vehicle scheme allows senior executive service employees access to a vehicle as part of remuneration packaging.

⁴⁸ In March 2008, the Government established a taskforce to examine options to improve the sustainability of Australian Government operations.

Figure 3.4

Australian Government leased vehicles performance against GVG target



*Note: From January 2006 to June 2006 the proportion of vehicles in the top half of the GVG dropped from 18.4 to 17.2 per cent as a result of a change in emissions standards from Euro 2 to Euro 3.

Source: Fleet Monitoring Body

3.25 Individual agency fleet contributions to the GVG target were varied. Some agencies had a high proportion of vehicles in the top half of the GVG. For example, the Defence Housing Authority has a score of 98 per cent with 167 vehicles while Centrelink, has a score of 76 per cent with 991 vehicles.⁴⁹ Some agencies with lower rating fleets had a high proportion of commercial vehicles such as Airservices Australia and the Australian Track and Rail Corporation. Other low rating fleets may reflect a commitment to Australian made vehicles, occupational health and safety considerations or client expectations.

Composition of the Government fleet

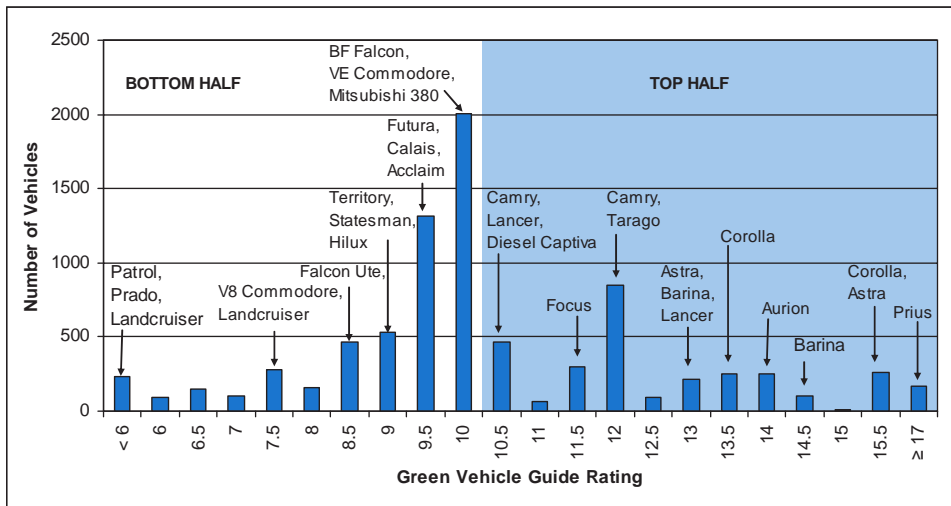
3.26 Consistent with Australian Government industry policy objectives, the Government fleet had a high proportion of Australian made vehicles. Many Australian made vehicles are large six and eight cylinder cars with GVG ratings of 10 or less and these feature prominently in the fleet (particularly in

⁴⁹ Centrelink was the single largest contributor to the Commonwealth fleet achieving the GVG target of 28 per cent of vehicles being in the top half of the GVG.

the Executive segment of the fleet). Figure 3.5 shows the frequency distribution of vehicle GVG scores for the fleet along with examples of common vehicles.

Figure 3.5

GVG ratings of common Australian Government fleet vehicles



Note: Different versions of the same model can have different GVG scores. For example, manual and automatic of the same model vehicle often score differently.

Source: Fleet Monitoring Body

3.27 The guidelines regarding the selection of pool and executive vehicles require that vehicles must be either made in Australia or imported by an Australian manufacturer with an engine capacity of 2 000cc or less. The guidelines allow for four wheel drive, sports utility and light commercial vehicles if required for operational reasons.

3.28 The provision to import vehicles with an engine capacity of 2 000cc or less by Australian manufacturers has allowed an increase in the number of medium and smaller vehicles in the top half of the GVG, with the Prius, Corolla, Astra, Barina, Lancer and Focus all being imported. During the 2005 audit, 11 of the 22 available pool vehicle models were in the top half of the GVG, this rose to 14 out of 23 vehicles by 2008. However, large Australian made cars that rate in the bottom half of the GVG are still comparatively well represented in the Government fleet.

Discounts for large Australian made cars

3.29 The 2005 audit highlighted tensions between costs, preferences for Australian made vehicles and meeting the Government's goal to reduce emissions. In 2008, these tensions still exist. Consistent with findings in the 2005 audit, discounts of up to 30 per cent for large Australian made six cylinder cars are helping to keep the proportion of large cars in the fleet high. The most popular small cars tend to receive around ten per cent discount, while the most popular medium sized cars receive a discount of around 18 per cent. Nevertheless, a comparison of the average whole-of-life-cycle costs of the most common base model cars in the fleet showed that medium cars are 20 per cent more expensive than small cars, while the large vehicles are 35 per cent more expensive than small cars.⁵⁰

3.30 Plans by Toyota to manufacture the hybrid Camry from 2010 and Ford to manufacture the smaller Focus from 2011, may offer fleet purchasers increased options for more environmentally friendly Australian made vehicles in the future. The Fleet Monitoring Body has advised that the Government has made a commitment to the Australian vehicle manufacturers that, by 2020, 50 per cent of the Australian Government fleet will be Australian-made, value for money, environmentally friendly cars. The Fleet Monitoring Body has also advised that it is in discussions with Toyota and Ford regarding the introduction of these vehicles into the Government fleet.

Comparison with state fleet environmental performance targets

3.31 The majority of Australian State Governments have a minimum environmental procurement standard for their fleets (with exceptions for special purpose vehicles). Only Victoria and South Australia do not have a minimum environmental standard. NSW, Queensland and Tasmania base their standard on the GVG while Western Australia requires four cylinder vehicles. Queensland and Tasmania both require a minimum of 5.5 greenhouse rating (effectively requiring a minimum GVG score of 10.5 out of 20) for all passenger vehicles and 3.5 for light commercial vehicles. NSW requires each agency to achieve an average GVG score of 12 (out of 20) in their individual fleets.

⁵⁰ Based on whole-of-life cycle indicative quotes provided by the Fleet Monitoring Body.

Conclusion

3.32 The ANAO's 2005 audit recommended measures to encourage greater energy efficiency in vehicle leasing arrangements and setting individual fleet energy efficiency targets.⁵¹ Although individual fleet targets were not set, progress towards improved fleet energy efficiency has been made.

3.33 The GVG target, originally set for December 2005, was eventually achieved in June 2007. Agency awareness of the target and varied contributions to the target were sufficient to raise the proportion of vehicles in the top half of the GVG to 36 per cent by June 2008, exceeding the original target of 28 per cent. The target was reviewed in late 2008 and a revised target has been proposed to Ministers. At the date of preparation of this report, there has been no decision to update the target or revise the guidelines.

Environmental performance of the Defence white vehicle fleet

3.34 As previously noted, Defence owns and maintains a white vehicle fleet (the Defence fleet) of 5 043 commercially available passenger and commercial vehicles. Although the Defence fleet was not included when the original GVG target was set, at the time of the previous audit Defence advised it was working towards achieving a target of 28 per cent of passenger vehicles scoring greater than 10.5 by December 2006. However, little progress had been made in meeting this target by September 2008. Only seven per cent of vehicles are in the top half of the GVG, a small increase from two per cent in the 2005 audit. Nevertheless, during the 2008 audit, Defence advised that it continues to operate under the GVG target and that further investigations into improving its fleet performance were underway.

3.35 The poor environmental performance of the Defence fleet may be partly explained by the high proportion of commercial vehicles (55 per cent) which have low GVG scores. However, other large agencies with a similar proportion of commercial vehicles in their fleets manage to have between 14 and 25 per cent of vehicles in the top half of the GVG. There is significant scope for Defence to improve the environmental performance of its fleet.⁵²

⁵¹ ANAO Audit Report No.22 2005–06, Cross Portfolio Audit of Green Office Procurement, Recommendation No. 7, p. 83.

⁵² If only the passenger vehicles in the Defence fleet are considered, Defence would still only have 15 per cent of vehicles in the top half of the GVG.

Conclusion

3.36 Given the size of the Defence white vehicle fleet, the ANAO considers it important that its performance is considered in the context of any updated environmental targets for the Australian Government vehicle fleet and broader sustainability goals. If the Defence white fleet were included in the whole-of-government fleet calculation, the proportion of vehicles in the top half of the GVG would drop to 25.4 per cent - below the 28 per cent target. The high proportion of commercial vehicles in the Defence fleet also raises the importance of considering the environmental performance of commercial vehicles. To address this issue the ANAO considers separate targets for the passenger and commercial vehicles would allow a stronger focus on the environmental performance of the Defence white fleet.

Information and communication technology

3.37 Australian Government agencies are major consumers of information and communications technology (ICT) products and services. To better manage and reduce the environmental impacts from the use of ICT, Australian Government policies encourage agencies to consider the effect of ICT on the environment.⁵³ The environmental impacts from the use of ICT include greenhouse gas emissions from energy use during normal operation and pollution from the manufacture of new equipment and the disposal of old equipment.

3.38 A review was recently commissioned into the Australian Government's use of ICT. The Gershon Review identified a lack of central coordination and guidance for ICT procurement. It also noted a significant disconnect between the Government's overall sustainability agenda and its ability to understand and manage energy costs and the carbon footprint of its ICT estate.⁵⁴ Recommendations included a proposal for a whole-of-government ICT sustainability plan to address this issue. The review's report commented on the

⁵³ The e-Government strategy, *Responsive Government: A New Service Agenda* (2006), notes electronic delivery serves the government's environmental objectives by helping to reduce paper, energy consumption and greenhouse gas emissions. The *Energy Efficiency in Government Operations Policy* (2006) also encourages agencies to reduce the whole-of-life cost and environmental impact of government operations.

⁵⁴ Department of Finance and Deregulation, *Review of the Australian Government's Use of Information and Communication Technology*, Canberra, 28 August 2008, key finding 7, p. 2.

rising costs of energy and the importance of managing energy, particularly in the context of the growth and significance of data centres.

Energy use in ICT

3.39 According to research from Gartner, the global ICT industry accounts for approximately two percent of global carbon dioxide emissions, a figure equivalent to the global aviation industry.⁵⁵ Gartner also estimates that large organisations spend between four and eight per cent, and sometimes up to ten per cent, of their ICT budgets on energy costs.⁵⁶

3.40 The ANAO's 2005 audit recommended that agencies consider energy efficiency in their ICT purchases.⁵⁷ Forty-two agencies agreed or indicated support for this recommendation. In the 2008 survey, 65 per cent of agencies advised they now consider energy consumption in their ICT procurement. In addition, the vast majority of agencies indicated they had implemented at least one measure to reduce energy consumption of office and ICT equipment. The extent to which these measures were implemented in agencies is outlined in Table 3.3 below.

⁵⁵ Gartner Press Release (26 April 2007), *Gartner Estimates ICT Industry Accounts for 2 Percent of Global CO2 Emissions*, available from <<http://www.gartner.com/it/page.jsp?id=503867>> [accessed 26 November 2008].

⁵⁶ Gartner Press Release (7 November 2006), *Gartner Says Look Beyond Power Issue as Pressure Mounts for 'Greener' IT*, available from <<http://www.gartner.com/it/page.jsp?id=498224>> [accessed 26 November 2008].

⁵⁷ ANAO Audit Report No.22 2005-06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 6, p. 75.

Table 3.3

Measures to reduce energy consumption of office and ICT equipment

Measure	Per cent of agencies
Power management policy for electronic equipment	10
PCs and monitors are either shut down or placed in a lower power state after prolonged periods of inactivity	78
PCs and monitors are shut down overnight	48
Printers, copiers and MFDs are placed into a lower power state after prolonged periods of inactivity	95
Printers, copiers and MFDs are shut down overnight	22
Other	11

Source: ANAO 2008 survey responses

3.41 Forty eight per cent of agencies shut down personal computers (PCs) overnight, with some reporting significant savings from this initiative. The Gershon Review also endorsed this measure, identifying software-controlled automatic turn-off of PCs as a ‘quick win’ for agencies.

3.42 Defence undertook a pilot project at Russell Offices in the ACT to quantify potential savings from the automatic power-off of PCs. During the pilot, base power load during off-peak hours was reduced by 25 per cent, saving approximately \$25 690 per year for one building alone. This initiative was estimated to save \$3-5 million per year if implemented across all Defence operations. Medicare Australia also reported annual savings of over \$100 000 from the automatic shutdown of monitors (after 15 minutes of non-use). The savings were in addition to annual savings of \$237 000 from a PC shutdown policy which has been in place since March 2007. The results achieved by Defence and Medicare Australia suggest there is potential for substantial savings and improved environmental performance from the wider adoption of this simple, cost effective initiative by other agencies.

Data centres are major energy users

3.43 Data centres are a significant area of energy use, typically accounting for 15 to 40 per cent of tenancy energy consumption.⁵⁸ A recent review for

⁵⁸ Big Switch Projects Pty Ltd, *Data Centre Energy Efficiency Report*, Dec 2004, commissioned by the Sustainable Energy Development Authority of New South Wales, p. 4.

Environment examined four different Australian Government agency data centres and found that mechanical services (such as air conditioning and power supply backup) consumed 54 to 78 per cent of data centre energy.⁵⁹ These figures highlight the value of taking steps to reduce the energy use of computer hardware in data centres, as energy savings will be multiplied through decreased mechanical load. The review also identified potential energy savings of between three and 34 per cent for these data centres through better design layout and upgrading data centre infrastructure.

3.44 Within data centres, mainframes and/or servers are the computers that run key aspects of the data centres' function, including managing email, web pages, data storage and applications. As a result, servers are generally much more powerful than desktop PCs and consequently use much more energy. To address this, 40 per cent of agencies indicated they consider energy efficient servers. Server virtualisation⁶⁰ was also raised as an energy saving measure by six agencies. These agencies advised that they have or are in the process of implementing virtual server solutions. ICT equipment must be fit-for-purpose and virtualisation may not suit all operational requirements. For example, during the audit validation, Airservices Australia indicated that virtualisation was unsuitable for its core server applications. However, because energy costs and environmental performance are significant on a whole-of-life cycle basis, these matters should be factored into procurement or leasing decisions. Environment provided detailed reports on two virtualisation projects it is undertaking that may have applicability to other agencies. These are discussed in Figure 3.6.

⁵⁹ Hyder Consulting, *Scoping Study into Energy Efficiency for Australian Government Data Centres*, June 2008, prepared for the Department of the Environment, Water, Heritage and the Arts, p. 4.

⁶⁰ Server virtualisation can in some instances significantly reduce the energy consumption and capital costs of data centres. Rather than having one physical server per function, virtualisation software allows multiple virtual servers to be run on one machine simultaneously, or be spread across multiple machines as demand requires.

Figure 3.6

Reduced energy use from server and desktop virtualisation

Department of Environment, Water, Heritage and the Arts (Environment)

Based on studies completed by Environment, virtualisation offers potential for improved efficiency and effectiveness by consolidating computing power, with potential benefits including reduced energy use, lowered cooling costs and reduced ICT capital costs.

Server Virtualisation

Environment has recently implemented a server virtualisation project which has achieved significant energy and cost savings. Compared to the provision of equivalent physical servers, the project demonstrated savings of 99 MWh in electricity, worth approximately \$14 900, per year. In addition, the total cost of implementing the virtual servers was actually \$116 000 cheaper than implementing a physical server equivalent; \$524 000 compared with \$640 000. The ability to easily expand (or decrease) the capacity of the system is vastly improved, with deployment of an additional virtual server costing around \$2 000 compared to at least \$20 000 for an additional physical server. Environment also noted that since deployment the system has also proven itself reliable, with availability exceeding physical equivalents.

Desktop Virtualisation

Environment has also trialled 'thin client', or desktop virtualisation, which has the potential to significantly reduce the environmental impacts of desktop ICT equipment by replacing the traditional PC with a small, efficient, low-power device. The trial, covering 22 staff over 5 weeks, identified energy savings of 83 per cent compared to the traditional PC model, even after the requirement for additional servers was taken into account. If rolled out across the organisation (2 800 desktops), Environment estimates it would save 561 MWh in electricity, worth \$84 182, a year. Substituting PCs for virtual desktop technology is essentially cost neutral within the normal life cycle. In addition, while PCs are typically replaced on a rolling 3 to 4 year basis, the thin client devices have an operational life exceeding 6 years, providing additional environmental and cost benefits.

Source: ANAO discussions with and examination of documentation from Environment during the audit

3.45 Internationally, efforts such as the *Climate Savers Computing Initiative*⁶¹ aim to reduce power consumption of computers by 50 per cent by 2010. The initiative encourages government organisations to commit to buying high-efficiency systems for their computer purchases and to using power-management tools on their existing PCs.⁶²

3.46 Australian Government agencies are already required to consider compliance with US Environment Protection Agency Energy Star standards although capital cost and fit for purpose considerations can override energy consumption criteria. Even in ICT procurement, many agencies (35 per cent

⁶¹ Started by Google and Intel in 2007, the Climate Savers Computing Initiative is a non-profit group of eco-conscious consumers, businesses and conservation organisations. Current board members are Dell, Google, HP, Intel Corporation, Lenovo, Microsoft Corporation and the World Wildlife Fund.

⁶² Climate Savers Computing Initiative, available from <<http://www.climatesaverscomputing.org/learn/membership-information/governmental-organizations>> [accessed 19 November 2008].

from the ANAO survey) do not consider energy efficiency. Given the significant environmental and financial savings from introducing more energy efficient ICT equipment, there is a case for agencies to give greater consideration to these matters as a priority within their business operations.

Conclusion

3.47 The rapidly growing and evolving nature of ICT within Australian Government agencies presents a challenge when managing environmental impacts. Simple steps like ensuring computers are shut down overnight can yield substantial benefits. Data centres will continue to be a major focus in the coming years, and technologies like virtualisation offer potential to significantly reduce energy consumption and infrastructure costs. Considering these options within the context of ICT business planning and procurement has the potential to yield better environmental and cost controls.

Recommendation No.2

3.48 To improve the energy efficiency of information and communications technology (ICT) equipment, the ANAO recommends that agencies (where they have not already done so) introduce:

- (a) environmental criteria in ICT business planning and procurement that explicitly requires energy efficiency and environmental performance standards for equipment; and
- (b) an ICT power management policy, that includes measures such as the automatic shut down of monitors and personal computers when not in use.

Agencies' responses

3.49 All agencies agreed to or were supportive of this recommendation.

ICT waste (e-waste)

3.50 ICT equipment has a significant environmental impact through the waste it generates, including toxic chemicals that go to landfill at the end of life. Obsolete or damaged computers and office equipment (often known as

e-waste) can contain lead, cadmium, mercury and brominated flame retardants in the plastics, which are health hazards.⁶³ The OECD has noted 'Australia is behind regional partners in developing producer responsibility for collection and recycling'. Taiwan, for example, recovers and recycles 75 per cent of computers.⁶⁴

3.51 The Gershon Review found there are 1.6 desktop devices (including laptops) for every APS employee across FMA Act agencies.⁶⁵ Assuming a rolling three to four year replacement schedule, this translates to around 100 000 desktop computers and laptops being replaced and eventually becoming scrap every year from the Australian Government alone.

3.52 The ANAO examined the extent to which agencies use product stewardship⁶⁶ clauses in their ICT procurement and encourage waste reduction (including hazardous waste reduction). Survey responses indicate that only 25.4 per cent of agencies include product stewardship clauses in their ICT procurement contracts. While pilot e-waste recycling programs such as *Byteback* in Victoria and *Recycle IT!* in NSW have been developed in the hope of forming a basis of a national framework for the responsible disposal of computer waste,⁶⁷ no such national framework currently exists.

3.53 Seventy-two per cent of agencies reported that they take steps to ensure that any hazardous ICT waste is disposed of in a manner that is environmentally sound, and does not contravene the *Hazardous Waste (Regulations of Exports and Imports) Act 1989*. Examples of measures agencies identified as taking included returning equipment to the vendor at the end of lease, selling obsolete equipment at auction and recycling PCs through a computer recycler.

3.54 Currently, there are no national standards for ICT waste, however the Environment Protection and Heritage Council is considering a cost benefit

⁶³ The then Department of the Environment and Heritage, *Electronic Scrap—A Hazardous Waste*, 2004, p.1.

⁶⁴ Organisation for Economic Co-operation and Development, *OECD Environmental Performance Reviews – Australia*, 2007, p. 266.

⁶⁵ Department of Finance and Deregulation, op. cit., p. 50.

⁶⁶ Product stewardship is an approach that recognises that manufacturers, importers, governments and consumers have a shared responsibility for the environmental impacts of a product throughout its full life cycle. (Environmental Protection and Heritage Council, *Co-regulatory Frameworks for Product Stewardship, An Industry Discussion Paper*, 2004) It is a form of extended producer responsibility.

⁶⁷ Byteback homepage, available from <<http://www.bytebackaustralia.com.au/>> [accessed 25 September 2008].

analysis of the regulatory options for e-waste in Australia. The ANAO also notes the opening in November 2008 of a new e-waste recycling plant in Sydney. Agencies need to be mindful of the environmental impact of their waste electronic equipment. Clearer policy direction in this regard would also assist in achieving a more consistent approach across agencies.

Conclusion

3.55 The environmental impact of ICT does not end once it is replaced. Agencies can improve their environmental performance by ensuring ICT service providers recycle or dispose of e-waste appropriately. There has been a lack of progress in developing national standards for ICT waste management. However, this should not preclude agencies from giving priority to this area.

4. Waste and Water Management

This chapter examines agencies' waste management and improvements in this area since the ANAO's audit in 2005. Water-saving measures implemented by agencies and the cost savings realised from a range of water saving initiatives are also discussed.

Waste management and recycling

4.1 Waste is the inevitable by-product of human social and economic activity. As noted by the Standing Committee on Environment, Communications and the Arts report in September 2008:

Despite heightened community, business and government awareness of waste issues and impacts, the quantity of solid waste produced in Australia continues to increase. Current generation [of waste] is approaching 40 million tonnes per annum with growth rates exceeding increases in GDP.⁶⁸

4.2 Waste generation and disposal can have significant environmental impacts. These include emissions to air, land and water (including greenhouse gas emissions) at various stages in the product life cycle. This cycle covers the extraction of raw materials to processing, marketing, transport and consumption, as well as the direct impacts associated with disposal.⁶⁹ While the role of the Australian Government in waste management has increased in recent years, it has limited constitutional powers to engage directly in domestic waste management issues; responsibility rests largely with state, territory and local governments.

4.3 Nevertheless, the Australian Government has responsibility for managing the waste it produces. Action to reduce the generation of waste, reuse materials and increase recycling are important elements of leadership in sustainable development. The ANAO's 2005 audit found that the performance of agencies in managing waste was poor and recommended that waste targets and improved measurement and reporting be introduced across all agencies. The ANAO also recommended agencies implement co-mingled and organic recycling schemes for office waste and include clauses in purchasing contracts

⁶⁸ Standing Committee on Environment, Communications and the Arts, September 2008, *Management of Australia's Waste Streams (including consideration of the Drink Container Recycling Bill 2008)*, p. 2.

⁶⁹ The then Department of the Environment and Heritage Submission to the Productivity Commission Inquiry into Waste Generation and Resource Efficiency, February 2006, p. 1.

to minimise packaging waste.⁷⁰ Forty three agencies agreed with or were supportive of this recommendation.

Progress towards more sustainable waste management

4.4 In terms of waste targets and improved measurement and reporting, little has changed since 2005. At the time of the audit, there are no whole of government requirements for agencies to manage their waste more sustainably, apart from specific requirements covering packaging waste.

4.5 Performance across the Australian Government varied considerably. For example, only 21 per cent of agencies included clauses in their contracts to minimise packaging waste. However, from the 2008 ANAO survey responses, the proportion of agencies that have implemented recycling for co-mingled office waste increased from 65 per cent in 2005⁷¹ to 89 per cent in 2008. Organic recycling has increased from 28 per cent in 2005 to 33 per cent in 2008. As all agencies recycled paper in 2005, the 2008 survey focused on quantities of each waste stream recycled or sent to landfill.

Overall waste reporting is poor

4.6 Although most agencies have recycling systems in place, the quality of waste reporting information was poor, with only ten per cent of surveyed agencies able to report on paper, co-mingled and organic recycling and general waste to landfill. The majority of surveyed agencies (52 per cent) were unable to provide any waste reporting data. This was despite 100 per cent of agencies advising Environment in 2006–07 that waste management reporting systems were in place or under development.⁷²

4.7 Inadequate waste reporting by agencies is not surprising given the lack of any Government requirements. This situation contrasts with state jurisdictions like New South Wales (NSW) which has implemented a Government Waste Reduction and Purchasing Policy. Victoria, the Australian Capital Territory, South Australia and Western Australia also have zero waste

⁷⁰ ANAO Audit Report No.22 2005-06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 11, p. 99.

⁷¹ The 2005 survey asked if agencies recycled metals or plastics separately. For comparison purposes, agencies that recycled either plastics or metals were counted as having co-mingled recycling in place.

⁷² Department of the Environment, Water, Heritage and the Arts, *Australian Government National Packaging Covenant Action Plan Annual Report 2006/07*, p. 6.

or towards zero waste goals. In the absence of any official policy on general waste management, the Australian Government's commitments as a signatory under the National Packaging Covenant (NPC) are the only guidance available for agencies regarding waste management.

The National Packaging Covenant

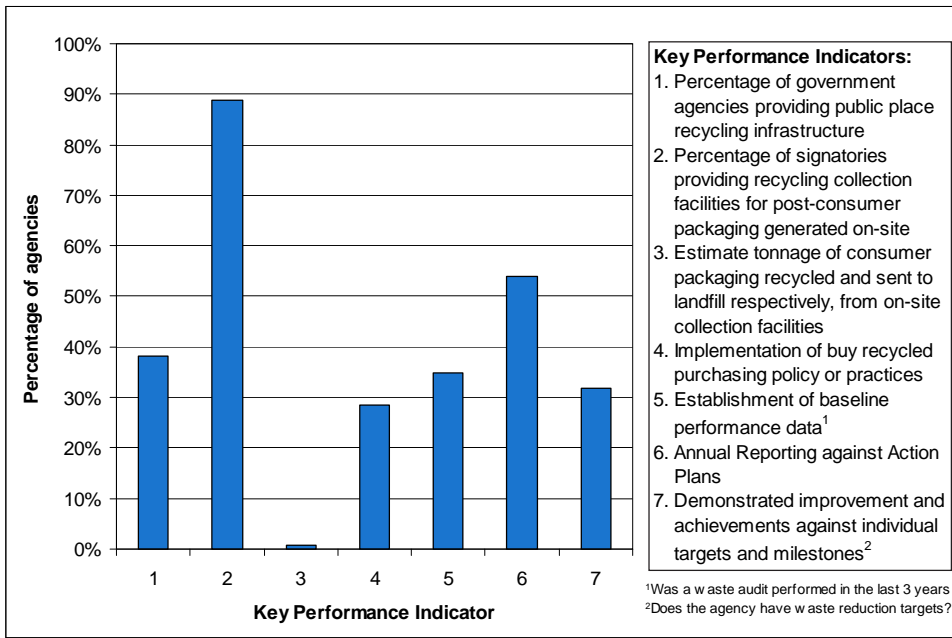
4.8 The NPC is an arrangement between Australian governments and participants in the packaging supply chain. The Australian Government has been a signatory to the NPC since 1999.⁷³ The covenant aims to minimise the environmental impacts of consumer packaging waste throughout the entire life cycle of consumer products.⁷⁴ Key goals of the covenant include increasing the amount of post consumer packaging recycled from 48 per cent in 2003 to 65 per cent by 2010⁷⁵ and reducing the amount of used packaging materials going to landfill. For governments, developing policies that encourage recycling and the manufacture and purchase of recycled products will demonstrate support for the NPC. Steps industry can take to reduce the environmental impacts of packaging include manufacturing packaging with easily recyclable materials, and reducing the amount of packaging used.

4.9 The Australian Government's commitment to the NPC was set out in the NPC Action Plan (July 2006–June 2008). The plan identified seven key performance indicators (KPIs) relating to government operations. From the 2008 survey, performance by agencies against these indicators was generally poor for six of the seven KPIs, as shown in Figure 4.1. The only indicator to rate well was the proportion of agencies that have implemented co-mingled recycling.

⁷³ The second National Packaging Covenant was signed by the then Minister for the Environment and Heritage on behalf of the Australian Government in November 2005.

⁷⁴ The regulatory underpinning is provided by the National Environmental Protection Measure (Used Packaging Materials), which is designed to deal with free riders and non-signatories and applied at the jurisdictional level.

⁷⁵ Department of the Environment, Water, Heritage and the Arts, *National Packaging Covenant Action Plan July 2006 – June 2008*, p. 10.

Figure 4.1**Performance against NPC KPIs by Australian Government agencies**

Source: ANAO 2008 survey analysis

4.10 A key finding was the poor result for KPI three, which required agencies to estimate the tonnage of packaging either recycled or sent to landfill. The only agency able to meaningfully fulfil this requirement was the Department of Defence, which had commissioned waste audits of 30 major sites across Australia. These audits provided a snapshot of waste management at the selected sites, identified areas for improvement and also sought to satisfy NPC reporting requirements. The audits showed that some areas achieved NPC packaging recycling targets while others did not.

Waste management within the Department of Defence

4.11 Defence provided figures indicating recycling rates of between 10 and 43 per cent for defence bases. Defence was also able to cite several regional examples of good practice waste management, including:

- a 'Bio-Bin' organic recycling trial for mess waste, which provides fertilizing material for the Defence estate;
- following a waste audit undertaken at Russell Offices, a co-mingled recycling system was being implemented at all offices, bases and

living-in-accommodation for service personnel in the ACT/South NSW region;

- in one region Defence has been able to sell high quality used paper to recyclers, rather than having to pay to have it taken away. The value of waste was also demonstrated by increased security being introduced after a palette of used toner cartridges was stolen from a loading dock at a particular site;
- introducing requirements for tenderers to demonstrate their commitment to waste minimisation and support Defence in reporting on waste and reducing hazardous waste; and
- diversion rates at approximately 60 per cent of waste from landfill at large office sites.

4.12 However, as is the case for most agencies, the ANAO found the primary waste management issue for Defence as a whole was the lack of aggregated performance information to indicate the weight and characteristics of waste streams. Plans for a database covering the top 100 sites generating 85 per cent of Defence's waste have been delayed and it is unclear when such a system will be put in place. Without the benefits of such a system, the data on waste management currently being collected is not being effectively managed or used.

Difficulties in meeting NPC reporting requirements

4.13 During the course of the audit a number of agencies commented on the difficulties in meeting the NPC reporting requirements. Agencies have struggled to separately identify packaging waste from the paper, co-mingled⁷⁶ and general waste to landfill streams. The initial survey responses included five agencies reporting information for packaging recycled or sent to landfill. However, closer investigation by the ANAO found that apart from Defence, only the Department of Immigration and Citizenship was able to separately define packaging waste and provide at least partial reporting data.⁷⁷

⁷⁶ Discussions with Environment confirmed that the majority of co-mingled waste recycling in an office context would typically consist of post consumer packaging, e.g. cans, bottles, rigid plastic packaging etc.

⁷⁷ The Department of Immigration and Citizenship specifically recorded the amount of cardboard boxes recycled. However, this did not include any other post consumer packaging.

4.14 To address this issue, Environment commissioned a consultancy in July 2008 to develop a waste management reporting tool to assist agencies in meeting NPC reporting requirements. This tool is designed to enable agencies to enter waste data from physical waste audits or volume modelling. As an interim measure, it also allows for agencies with no waste reporting data to estimate waste produced, based on the number of equivalent full time employees. The ANAO notes, however, that actual measurement of waste streams will be required to assess progress towards the goals. The tool aims to generate a report, which will then be submitted to Environment for preparation of the NPC Action Plan Annual Report. To date, Australian government agencies have not collectively been able to provide any meaningful performance data to indicate the success or otherwise of the NPC Action Plan (July 2006–June 2008). A significant improvement in the quality of data provided by agencies will be required to meet reporting requirements in the next NPC reporting period, which will encompass the NPC Action Plan for 2008–10.

Waste measurement and monitoring

4.15 The NPC requires, among other things, reporting of waste generated by agencies. A first step in achieving this goal is ensuring reliable measurement systems are in place. A number of agencies provided estimated data or data extrapolated from less than a full year of measurement. Conventions for reporting waste data were also mixed, with approximately two-thirds of quantities reported in weight with the other third being reported in volume. Some agencies even reported a mixture of the weight and volume. A number of agencies have indicated plans to improve waste reporting data by including it as a requirement in future waste management contracts.

Conclusion

4.16 Agencies have improved their environmental performance regarding waste management, with rates of co-mingled and organic recycling increasing since 2005. However, overall performance by agencies in waste management is difficult to gauge given that most agencies do not measure how much waste they generate. This lack of information severely impairs the ability of the Australian Government to fulfil its obligations as a signatory to the NPC.

Recommendation No.3

4.17 To improve sustainability practices in waste management the ANAO recommends that agencies (where they have not already done so):

- (a) consider practical measures to divert waste from landfill, such as organic and co-mingled waste recycling for primary sites;
- (b) require waste service providers to report the weight of major waste streams, including paper recycled, co-mingled waste recycled and general waste to landfill, in future waste management contracts;
- (c) set agency-wide targets based on a standardised measure such as the weight of waste generated per person and/or diversion from landfill; and
- (d) report performance against these targets as part of agency commitments under the National Packaging Covenant obligations.

Agencies' responses

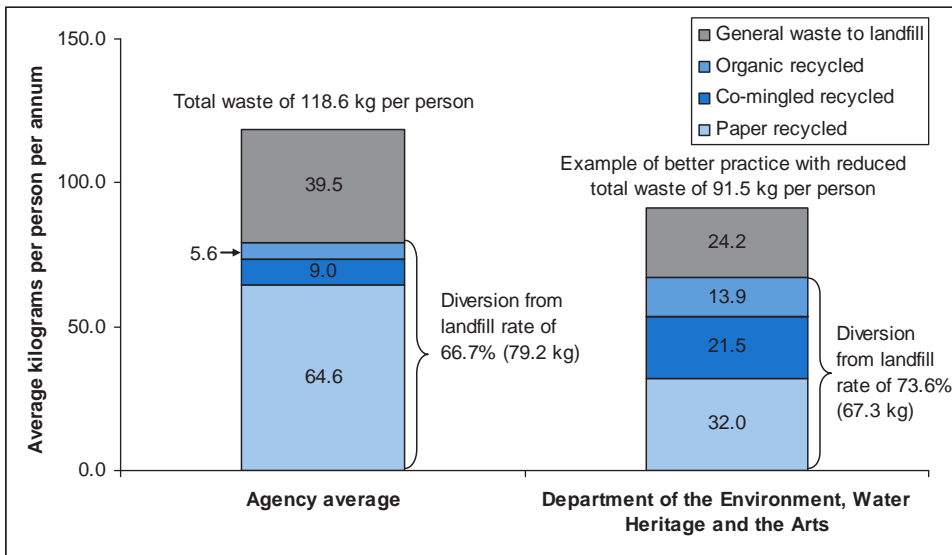
4.18 All agencies agreed to or were supportive of this recommendation.

Better practice model for waste management

4.19 Two important goals in better waste management are to minimise the amount of waste generated and maximise the amount of waste recycled and diverted from landfill. However, agencies are generally not aware of how much waste they are generating and, as a result, benchmarking performance is difficult. In contrast, Environment has been actively reducing waste and promoting recycling for many years. Based on the limited reported data, the ANAO has constructed a basic model of the 'average' Australian Government office in terms of waste generation. Figure 4.2 demonstrates how agencies can significantly improve their waste reduction and recycling efforts when compared to Environment's performance. Agencies that do not yet monitor or actively manage their waste may actually generate even more waste to landfill than the 'average' and recycle less.

Figure 4.2

Average waste recycled compared with the Environment Department



Source: ANAO 2008 Survey analysis. (Note that the results for 'agency average' were calculated from between nine and 19 agencies for each category, as not all of those agencies could provide data for all categories.)

4.20 Based on Figure 4.2, paper is by far the largest waste stream of most Australian Government agencies. From the survey data provided, waste generation by Environment is lower than the average, primarily due to the lower weight of paper recycled. This decreased paper use, and consequent reduced amount of recycling, is consistent with Environment's lower than average reported paper use per person. The amount of non-paper waste generated by Environment is similar to the agency average (59.6 kg and 56.0 kg respectively), indicating an inevitable level of waste generation per person. However, recycling efforts are more than twice as effective at Environment, diverting 59 per cent of non-paper waste from landfill, compared to the agency average of 27 per cent.

4.21 Comparison with State Governments' waste figures is difficult because of differences in methodology and coverage. For example, NSW waste-to-landfill figures include building materials used in road construction. Nevertheless, NSW figures indicate 66.0 kg of paper and cardboard and 7.3 kg

co-mingled waste is generated per person⁷⁸ and the Victorian government average total waste per person reported in 2008 was 84.6 kg.⁷⁹

Conclusion

4.22 There is significant room for improvement by agencies in improving recycling rates, particularly in diverting non-paper waste from landfill. Despite limited data, useful information is available from some agencies. This data can be used to provide realistic goals for diverting waste from landfill and improving recycling rates and to provide a way forward for agencies aiming to move closer to better practice.

Water consumption and conservation

4.23 Commercial office buildings use a significant amount of water. Office water use can account for up to ten per cent of capital city water consumption. A moderate sized building of 10 000 m² typically consumes over 20 000 litres per day or more than seven million litres per annum – enough to supply 40 average homes.⁸⁰ Despite declining per capita urban water use, since 2005, water utilities in almost every urban area had imposed domestic water restrictions in response to increasing supply pressures.

4.24 The cost of water for the Australian Government has been estimated at approximately \$14 million per annum.⁸¹ While not a major cost centre, the cost of fresh water has been increasing and is predicted to rise further⁸² if low rainfall patterns continue. The availability of water has also decreased with restrictions. Consequently, the issue of water efficiency and conservation should be a priority in all government agencies from both an environmental and cost-saving perspective. The ANAO's 2005 audit recommended that the then Department of the Environment and Heritage provide better practice

⁷⁸ Based on NSW Government *Waste Reduction and Purchasing Policy (WRAPP) Progress Report 2008*, with assistance from NSW Department of Environment and Climate Change.

⁷⁹ Commissioner for Environmental Sustainability Victoria, *2008 EMS Strategic Audit Report*, 2008, p.18. The report also noted concerns over the accuracy of waste data.

⁸⁰ The then Department of the Environment and Heritage, *Water Efficiency Guide: Office and Public Buildings*, October 2006, Canberra, p. 5.

⁸¹ Calculated from the 2005 cost of water for the Department of Defence, which accounts for 69 per cent of total Australian Government water use, and extrapolated to remaining agencies.

⁸² For example, the Queensland Government outlook for bulk water prices for Brisbane is set to rise from \$628 a megalitre in 2007/08 to \$2 755 a megalitre in 2017/18. This represents a price increase of over 400 per cent over ten years (Nominal dollars not allowing for inflation).

guidance to agencies on water conservation practices.⁸³ The department agreed with this recommendation. The 2005 audit also recommended that agencies consider appropriate targets and cost effective measures to reduce water consumption.⁸⁴ In response, 43 agencies agreed with or were supportive of this part of the recommendation.

4.25 In October 2006, Environment published a *Water Efficiency Guide for Office and Public Buildings*, which outlines opportunities for reducing water consumption. The Guide notes that water savings of between 30-40 per cent are often achievable in office buildings.⁸⁵ Water savings will also translate into modest financial savings, although these may accrue to building owners rather than the lessee, depending on contractual arrangements. According to the guide, the majority of water in office buildings is consumed by amenities, cooling towers and losses through leakage.

Water saving measures and cost savings

4.26 Steps to reduce water use within an office tend to focus on water use in amenities, although agencies indicated increased awareness of leaks and water use in cooling towers. Dual flush toilets are the most common water saving measure implemented by agencies, at 94 per cent (up from 66 per cent in 2005). Waterless urinals are a newer initiative implemented by 62 per cent of agencies.⁸⁶ The ANAO survey showed a general increase in water conservation measures being adopted since 2005 as outlined in Figure 4.3.

⁸³ ANAO Audit Report No.22 2005–6, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 9 (a), p. 91.

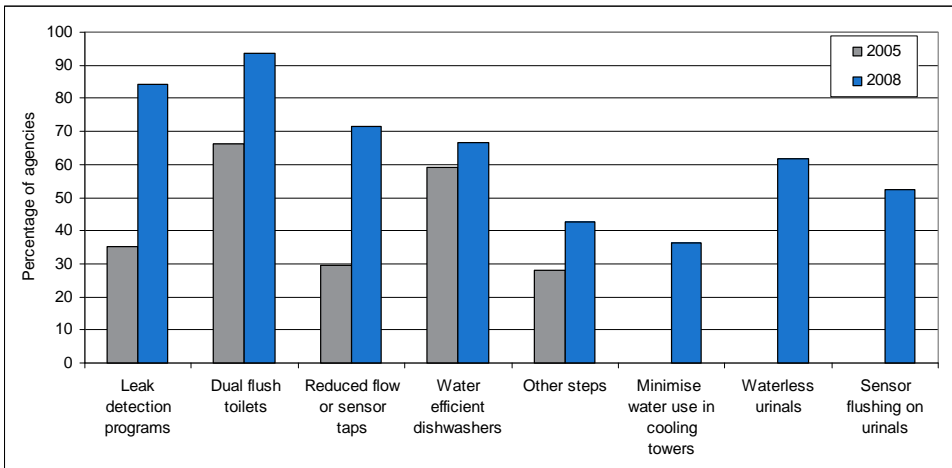
⁸⁴ *ibid.*, Recommendation No. 9 (b), p. 91.

⁸⁵ The then Department of the Environment and Heritage, *Water Efficiency Guide: Office and Public Buildings*, October 2006, p. 5.

⁸⁶ The ANAO noted two examples during the audit where agencies with older buildings found waterless urinals incompatible with the original piping. The use of waterless urinals was subsequently stopped.

Figure 4.3

Steps taken by agencies to reduce water consumption



Source: ANAO 2008 Survey analysis (Note that comparative survey results are not available for three water-saving initiatives as the question was not asked in the 2005 survey)

4.27 In survey responses and during interviews throughout the audit, several agencies provided examples of cost savings realised from water conservation measures. Examples of these are outlined in Figure 4.4.

Figure 4.4

Examples of other agencies' water efficiency measures

The Family Court of Australia
At one site, after the installation of waterless urinals and flow controls, water costs dropped from \$11 640 in 2005, with water consumption 6 201 kL, and sewerage 4 220 kL, to \$3 697 in 2007, where water consumption was 1 544 kL and sewerage 956 kL. The initiative represented a 68 per cent reduction in water costs for that facility.

Airservices Australia
Water consumption at the Airservices Australia Brisbane complex was reduced by 25 per cent from 2004/05 to 2005/06. The cost of the works to reduce water use was \$100 000 and resulted in an estimated \$15 000 per annum saving. A further 25 per cent reduction was achieved in the 2006/07 year, resulting in similar savings. The initial savings were achieved through voluntary measures, with the further savings achieved under a mandatory water efficiency management plan, developed when Level 4 water restrictions were introduced by the Queensland Water Commission.

Source: ANAO 2008 Survey responses and audit validation

4.28 Defence commissioned a *National Water Use and Consumption Profile Study*, which was completed in October 2006. The study provided a good overview of water use across Defence's major built assets with analysis of the highest water using facilities. These facilities accounted for 80 per cent of total

consumption. The study identified priority sites and anomalies and set out a clear direction for improvement, including regular review and benchmarking of water use intensity figures. The report indicated several facilities are a concern with KPIs suggesting possible leakages, faulty metering or possible water diversion to other (non-Defence) users. Defence provided examples of measures implemented in NSW and ACT, along with their water and cost savings and associated pay-back period, which are outlined in Table 4.1.

Table 4.1

Department of Defence water efficiency measures

Water conservation initiative implemented by Defence	Cost of installation \$	Water saving/day (kL)	Water saving (kL p.a)	Cost saving p.a (average cost \$1.10/kL)	Payback period (years)
AAA showerheads in officers mess and accommodation at ADFA	3 600	6.177	2 254	2 479	1.45
Dual flush toilets in health centre, gym, mess and museum at RMC	13 200	15.568	5 682	6 250	2.11
Flow restrictors at Russell Offices	2 100	.733	267	294	7.13
Water efficient washing machines	2 000	.555	202	222	8.98

Source: Department of Defence

Measuring and benchmarking water use

4.29 Despite the majority of agencies indicating they have taken steps to reduce water consumption, knowledge of actual water use was poor. Only 35 per cent of surveyed agencies were able to measure water usage at one or more sites, a small improvement from 28 per cent in 2005. Agencies have commented that meaningful water consumption data can be difficult to obtain from landlords, especially in multi-tenanted sites or where a gross lease is in place. Water metering and sub-metering allows tracking of water use for different facilities and purposes over time and can assist in the identification of leaks. Metering also allows agencies to more precisely monitor the impact of any water saving measures implemented. Another important step when planning water saving initiatives is to conduct a water audit. However, only

16 per cent of surveyed agencies have conducted a water audit in the last three years.

4.30 Currently, there are no requirements or targets for agencies to reduce water use or achieve water use targets. This is reflected in only 24 per cent of agencies advising they had water targets in 2008, compared with 20 per cent in 2005. However, many water suppliers around Australia have required their non-residential customers and businesses, including government agencies such as CSIRO and Airservices Australia, to limit their water use in recent years.

4.31 Benchmarking of facilities with similar uses can identify opportunities for efficiency improvements or detection of major leaks. The National Australian Built Environment Rating System (NABERS)⁸⁷ has established water use benchmarks for office buildings based on a 5-star rating and adjusted these for climate. The 2008 ANAO survey sought information from agencies about their water use and floor area. Survey respondents with water metering provided information across a number of their sites. The collated survey results, by facility type, are outlined in Table 4.2.

Table 4.2

Water use by floor area for ANAO 2008 survey respondents

Facility	Water use (kL/m ² /pa)		
	Median	Minimum	Maximum
Office buildings Canberra (9 sites)	0.74	0.27	2.10
Office buildings Sydney/Melbourne (4 sites)	0.84	0.66	2.08
Public Buildings (9 sites)	0.51	0.16	1.98
Other facilities (incl. ABC studios, CSIRO cultural collections storage) (70 sites)	0.57	0.02	4.69
Across 18 survey respondents (92 sites)	0.58	0.02	4.69
Defence ⁸⁸	1.56	0.42	8.31

Source: ANAO 2008 Survey responses (18 respondents with water metering). Defence data is sourced from 2006 survey of national water use.

⁸⁷ NABERS is a performance-based rating system for existing buildings and is a national initiative managed by the NSW Department of Environment and Climate Change.

⁸⁸ Defence results per separate National Water Use and Consumption Study, October 2006.

4.32 The survey sample of 18 agencies is too small to extrapolate across the Australian Government. However, under the NABERS star rating system for office buildings in Canberra, most of the Canberra office-based survey respondents would receive between a one and two and a half NABERS rating based on their median water use of 0.74 kL/m²/pa. This result indicates that there is significant scope for improvement in agencies' water use.

Conclusion

4.33 Water conservation is a high profile issue in Australia as a consequence of drought and ongoing supply constraints. Although the cost of water to agencies is relatively low (when compared to the cost of energy), there are still savings to be made through water conservation measures. Since 2005, Australian Government agencies have taken increased steps to reduce water consumption. However, performance data, publicly available or otherwise, of agency water consumption is limited. Consequently, there are constraints in reporting on the effectiveness of water reduction initiatives. From the available data, agencies can make significant improvements in water efficiency. Accurate annual data on consumption and measurable targets would assist in improving the water conservation efforts of Australian Government agencies.

Recommendation No.4

4.34 To improve water conservation, the ANAO recommends that agencies (where they have not already done so):

- (a) consult with building owners to obtain annual data on water consumption where practicable;
- (b) set agency-wide water reduction targets and implement cost effective water conservation measures for all primary sites; and
- (c) monitor and publicly report progress against these water reduction targets.

Agencies' responses

4.35 All agencies agreed to or were supportive of this recommendation.

5. Energy Efficiency in Buildings and Facilities

This chapter discusses current government policy in relation to energy use, and examines overall progress by agencies in achieving the government policy targets. The cost implications of not achieving these targets and initiatives being undertaken by agencies to reduce their energy use are also discussed.

Introduction

5.1 For Australian Government agencies, total energy consumption in 2006–07 (excluding Defence Operations), was approximately 9 million gigajoules.⁸⁹ This consumption contributed to over 95 per cent of Australian Government greenhouse gas emissions.⁹⁰ The ratification of the Kyoto Protocol⁹¹ commits Australia to limit national greenhouse gas emissions in accordance with the Kyoto target. Agencies have a role to play in demonstrating leadership and meeting the Government's commitments. Agencies also have specific requirements to reduce the energy intensity of their operations under the *Energy Efficiency in Government Operations Policy*.

5.2 Reducing energy consumption has the added benefit of reducing costs. Electricity and natural gas alone cost approximately \$435 million in 2007–08.⁹² Energy costs have increased significantly in recent years. For example, the primary electricity charge for Australian Government agencies during business hours in the ACT had a more than three-fold increase as part of a new whole of government contract negotiated in 2007. Prolonged drought conditions have also reduced water flows impacting upon hydro-electricity production from the Snowy Hydro system and continued low rainfall is expected to place

⁸⁹ Department of the Environment, Water, Heritage and the Arts, draft *Energy Use in Australian Government's Operations 2006-07 Report*, p.11. This report states that Defence operations account for over 12 million gigajoules in 2006-07.

⁹⁰ Department of the Environment, Water, Heritage and the Arts, *Energy Efficiency in Government Operations (EEGO) Policy*, Canberra, 2006, p.5.

⁹¹ The Kyoto Protocol is an international agreement to reduce greenhouse gas emissions. Australia's Kyoto target is 108 per cent of 1990 emission levels.

⁹² This figure was estimated by the ANAO based on 2006-07 usage of energy as reported in the draft *Energy Use in Australian Government's Operations* report and using the 2007 negotiated whole of government electricity prices in ACT (where a large portion of Australian Government office-based operations are located). This figure does not include liquid fuels.

further cost pressures on agencies and other electricity consumers. Within this context, there are likely to be shorter pay-back periods⁹³ for energy efficiency measures.

5.3 Table 5.1 outlines the ten largest government energy users. These agencies account for over three-quarters of total Australian Government energy use.

Table 5.1

Top ten energy using agencies in the Australian Government

Agency	2006–07 Percentage of total
Department of Defence (excl. Defence Operations)	44.8
Commonwealth Scientific and Industrial Research Organisation	8.1
Australian Customs and Border Protection Service	5.0
Centrelink	4.7
Australian Taxation Office	3.7
Australian Broadcasting Corporation	2.7
Australian Antarctic Division	2.4
Australian Federal Police	2.1
Department of Parliamentary Services	1.6
Australian Nuclear Science and Technology Organisation	1.6
Total	76.7

Source: Department of the Environment, Water, Heritage and the Arts, draft Energy Use in the Australian Government's Operations report 2006–07

Energy efficiency in Australian Government operations

5.4 In September 2006, the then Government released a new energy policy, *Energy Efficiency in Government Operations* (EEGO), with revised energy intensity portfolio targets to be achieved by 2011–12. These targets replaced the previous targets established in 1997. Table 5.2 compares the previous and revised targets.

⁹³ Payback period refers to the time period required for a return on an investment to repay the sum of the original investment.

Table 5.2

EEGO policy targets compared with 1997 targets

Energy Intensity Targets	Explanation	2006 policy targets (to be met by 2011–12)	1997 policy targets (to be met by 2003)
Tenant light and power (MJ/person/annum)	Energy used for tenant operations in buildings whose primary function is office space. It includes lighting, office equipment, supplementary air conditioners, boiling water units etc. ⁹⁴	7 500	10 000
Office central services (MJ/m ² /annum)	Energy used in the provision of services in buildings common to all tenants. It includes building air conditioning, lifts, security and lobby lights, domestic hot water etc. ⁹⁵	400 (nominal split 50:50)	500 (nominal split 70:30)
Defence	A ten per cent energy reduction target was included in the Defence Energy Strategy.	Energy management strategy and install sub-meters at Defence bases.	Energy target of 2.5 million gigajoules for Defence Establishments

Source: Energy Efficiency in Government Operations (EEGO) policy, 2006

5.5 The overall goal of the EEGO policy is to reduce the Australian Government’s energy intensity by 2011. These targets represent a 25 per cent reduction in energy intensity for tenant light and power (TLP) and a 20 per cent reduction in energy intensity for office central services (OCS). The EEGO policy specifies that where metering data is not available, agencies should estimate their electricity consumption by apportioning a 50:50 split for TLP: OCS. This approach differs from the nominal allocation under the 1997 policy of a 70:30 split for TLP: OCS. Care is needed when comparing performance over time because of the change in nominal allocation. This change affects larger agencies such as Medicare Australia and the Australian Taxation Office (ATO). Both agencies have raised this matter in their respective reports to the Department of the Environment, Water, Heritage and the Arts (Environment).

⁹⁴ Department of the Environment, Water, Heritage and the Arts, draft *Energy Use in the Australian Government’s Operations Report 2006-07*, Canberra, 2008, p.5.

⁹⁵ *Ibid*, p.5.

5.6 Performance against the EEGO policy is documented and publicly reported each year in the *Energy Use in the Australian Government's Operations Report*. There are 14 end-use reporting categories⁹⁶ but only performance targets for two reporting categories; TLP and OCS. Although there is currently no target for data centre energy intensity, Environment advised that a data centre energy management strategy is being developed.⁹⁷ Energy consumed by data centres was reported under TLP or OCS categories, depending upon the leasing and sub-metering arrangements.

5.7 In 2006–07 a new reporting category for computer (data) centres was created. Given that data centres typically consume between 15-40 per cent of total office energy consumption (as discussed in Chapter 3), the new reporting category for data centres affects the comparability of performance in TLP and OCS with data prior to 2006–07. In the reporting year 2006–07, eleven (of 113 budget-funded) agencies were able to report against the data centre end-use category. Eight of these agencies reported significant energy reductions in TLP varying from seven to 54 per cent, with the average energy consumption for data centres being 22 per cent. As a consequence, the reported reductions in TLP energy consumption can be largely attributed to apportioning energy consumption to the new data centre reporting category.

5.8 The issues arising from the estimate of energy consumption and the introduction of a new end-use category limit the ability to easily compare energy performance over time for key end-use categories, TLP and OCS. These changes do not affect the aggregate energy consumption data.

Progress in implementing the EEGO policy

5.9 The latest available aggregate data on Australian Government energy consumption (2006–07) indicates that overall energy consumption has increased by 4.1 per cent over the past eight years. However, the report notes that during this time, Australian Government staff numbers rose by 37.2 per cent and the floor area for office space increased by 25.1 per cent.

⁹⁶ End-use reporting categories include TLP, OCS, Public Buildings, Law Courts, Climate Controlled Stores, Laboratories, Defence Establishments, Computer Centres, Passenger Vehicles, Antarctic Bases, Defence Operational Fuels, Other Buildings, Other Transport and Other Uses.

⁹⁷ Under the EEGO policy Environment was required to develop energy intensity targets for end-use categories including computer centres, laboratories, and public buildings.

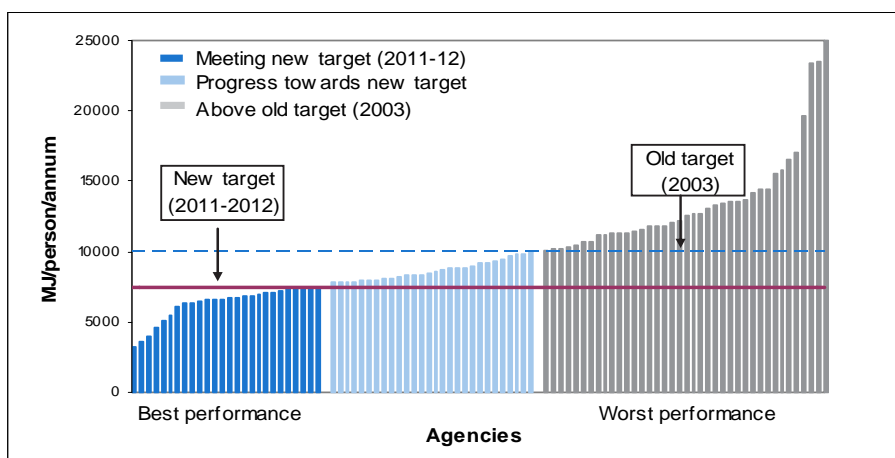
Consequently, energy intensity has decreased incrementally over this period.⁹⁸ The focus by Environment on energy intensity reflects changes since the 2005 audit where the ANAO recommended that Environment focus reporting on changes in energy intensity to improve the quality and consistency of reporting on energy consumption.⁹⁹

Tenant light and power

5.10 In the first reporting year (2006–07) under the EEGO policy, TLP energy accounted for 5.9 per cent of total energy consumption in Australian Government operations and just over 11 per cent of greenhouse gas emissions (308 548 tonnes of carbon dioxide equivalent). As outlined in Figure 5.1, of the 93 budget-funded Australian Government agencies who reported TLP in the draft *Energy Use in the Australian Government's Operations 2006–07* report, 28 per cent (26 agencies) are already performing better than the new target of 7 500 MJ/person/annum.

Figure 5.1

Agencies ranked according to tenant light and power energy intensity



Source: ANAO analysis of 93 agencies reporting to the draft *Energy Use in Australian Government's Operations* report, 2006–07

⁹⁸ Department of the Environment, Water, Heritage and the Arts, draft *Energy Use in the Australian Government's Operations Report 2006-07*, Canberra, 2008, p. vii.

⁹⁹ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation 12, p.110.

5.11 Energy intensities for TLP vary widely across Australian Government agencies. There is no size correlation between agencies and energy performance. Large, medium and small agencies are distributed across the range of performance categories. Those agencies achieving the target have undertaken significant measures to reduce energy consumption or occupy buildings where these measures have already been taken by the building owner. Best practice is considerably better than the target. For example, the following agencies have achieved good results for 2006–07:

- Great Barrier Reef Marine Park Authority – 6 295 MJ/person;
- Medicare Australia – 6 413 MJ/person; and
- Australian Trade Commission – 6 531 MJ/person.

5.12 Environment reported a positive result of 4 597 MJ/person. However, this only reflects part of the Department's operations.¹⁰⁰ The Medicare Australia result, along with results of other agencies, is also influenced by the change in end use categories and the split between TLP and OCS as discussed earlier.

5.13 The 39 agencies (42 per cent) with energy intensities over 10 000 MJ/person/annum will need to make a concerted effort to reduce their energy intensity if they are to meet the target by 2011. Agencies within this category for 2006–07 include the following departments:

- Foreign Affairs and Trade – 10 139 MJ/person;
- Education, Employment and Workplace Relations – 12 035 MJ/person; and
- Families, Housing, Community Services and Indigenous Affairs – 15 490 MJ/person.¹⁰¹

5.14 While the Department of the Prime Minister and Cabinet is in this latter category, it has recently moved into new premises, which are designed to be more energy efficient. Consequently, their 2007–08 EEGO report should reflect an improvement in efficiency. The Attorney-General's Department is also

¹⁰⁰ Energy reports from National Parks and the Antarctic Division are separate from the core Department.

¹⁰¹ FaHCSIA noted that some offices in hotter and remote regions of Australia will consume more energy for air conditioning.

expected to move into new premises by 2009 and should also have improved performance in 2008–09.

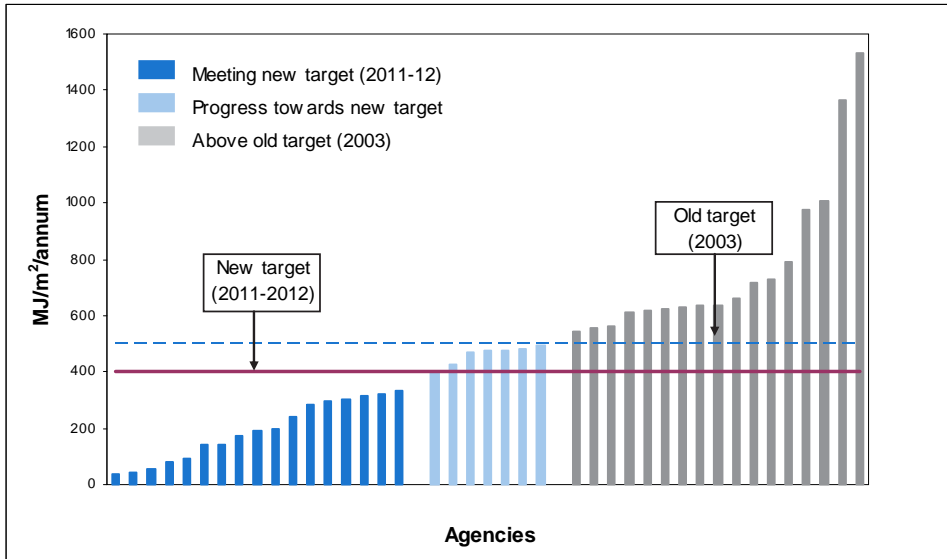
Office central services

5.15 In the first year reporting under the EEGO policy, office central services (OCS) accounted for 2.9 per cent of total Australian Government energy consumption and 4.2 per cent of greenhouse gas emissions (112 324 tonnes of carbon dioxide equivalent) in 2006–07.

5.16 However, Environment estimates that a further 4 per cent in energy consumption and 5.8 per cent of greenhouse gas emissions can be attributed to 'unreported' OCS, as detailed in the draft 2006–07 *Energy Use in the Australian Government's Operations* report. Combined reported and unreported OCS could account for as much as six per cent of total energy consumption and ten per cent of greenhouse gas emissions for Australian Government operations.

5.17 Of the 113 budget-funded agencies, 41 (36 per cent) were able to report energy intensity for OCS.¹⁰² As seen in Figure 5.2, of those reporting agencies, there is a wide range of performance, with 41 per cent (17 agencies) currently below the new target of 400 MJ/m², 17 per cent (seven agencies) are currently between 400-500 MJ/m² and 41 per cent (17 agencies) are over the former 2003 target of 500 MJ/m.²

¹⁰² Only agencies paying for central services as part of their lease report on energy use in this category.

Figure 5.2**Agencies ranked according to office central services energy intensity targets**

Source: ANAO analysis of 42 agencies reporting to the draft Energy Use in the Australian Government's Operations report, 2006–07

5.18 The remaining 72 agencies (63 per cent) were not able to report towards office central services, largely because of the leasing arrangements of their properties. The vast majority (84 per cent) of surveyed Australian Government agency office sites are leased and many of these are in a net lease agreement.¹⁰³ Sub-metering, even for agencies in leased arrangements, has many advantages in managing energy use.

Cost implications and savings from current performance

5.19 Based on the latest available energy performance data from the draft *Energy Use in Australian Government's Operations* report and current cost information, the ANAO sought to estimate the gross financial savings that would be realised from improved energy efficiency. The ANAO calculated that

¹⁰³ A net lease requires that the tenant pay a fee for energy used in office central services during business hours, in addition to a flat rate for the rental of the leased space.

energy consumed in excess of the EEGO targets for TLP and OSC in 2006–07¹⁰⁴ accounted for 17.3 per cent of total Australian Government electricity and natural gas consumption in the two categories of TLP and OCS. The ANAO estimated that the additional cost incurred by agencies not yet meeting the EEGO energy targets for these two categories is \$17 million per annum.¹⁰⁵

5.20 The ANAO further estimated that if agencies could reduce their consumption across common energy use categories by the same percentage (17.3 per cent) then \$75 million per annum could be saved from the Australian Government's energy budget, at current costs.¹⁰⁶ Furthermore, many agencies have already demonstrated that they can operate with energy consumption levels well below the 2011–12 TLP and OCS targets. If other agencies were to achieve these lower levels, even greater electricity cost savings and environmental outcomes could be achieved.

5.21 While implementation of energy efficiency initiatives such as lighting upgrades and enhanced metering arrangements will involve some capital cost, the resultant savings from such measures would be ongoing and further increase over time as energy costs increase.

Defence performance against energy policy requirements

5.22 Defence is by far the largest energy user in the Australian Government, accounting for almost 45 per cent of total consumption (excluding Defence Operations). The 2006 EEGO policy required Defence to:

- develop a comprehensive energy management strategy for the entire portfolio by the end of 2006; and
- progressively install sub-meters at Defence bases as part of a coordinated program in order to better monitor and manage energy and to more accurately report against specific end use categories.¹⁰⁷

¹⁰⁴ Based on ANAO analysis of usage figures in draft *Energy Use in the Australian Government's Operations Report 2006-07*, Annex D – Energy Intensity Tables, compared with EEGO targets for TLP and OSC, 7 500 MJ/person/annum and 400MJ/m²/annum, respectively.

¹⁰⁵ Based on ANAO analysis using agency energy usage reported in the draft *Energy Use in the Australian Government's Operations Report 2006-07* and applying 2007 negotiated peak electricity and gas prices in the ACT.

¹⁰⁶ ANAO analysis based on \$434.5 million for total electricity and gas costs multiplied by 17.3 per cent excess usage.

¹⁰⁷ Department of the Environment, Water, Heritage and the Arts, *Energy Efficiency in Government Operations (EEGO) policy*, 2006, p.1.

Defence Energy Strategy and ten per cent reduction target

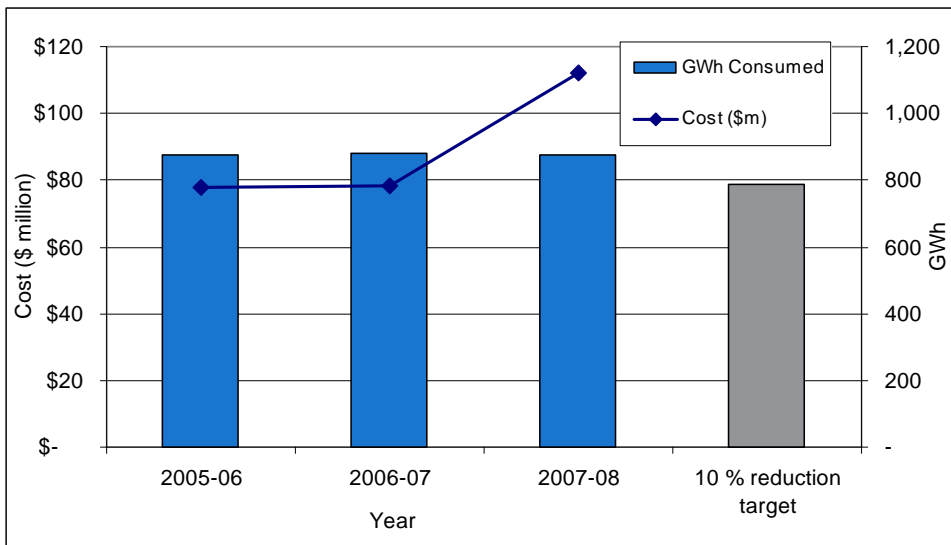
5.23 Defence promulgated its Energy Strategy in May 2007. The strategy established a target of a ten per cent energy reduction below the 2005–06 baseline to be met by June 2008. Establishing targets is good practice as it enables a quantitative assessment of what needs to be achieved and provides a clear framework for staff to work within. Defence commented that the target:

was successful in its intent to increase awareness and to stimulate action and changes in behaviour....(the department is) focussing on delivering key projects that are known to drive down energy consumption/increase energy efficiency.

5.24 The ANAO observed examples of energy efficiency undertaken in Defence. However, data indicates that energy consumption for major Defence bases has increased by 2.9 per cent (10 GWh) compared with the 2005–06 baseline year. Despite the implementation of energy efficiency initiatives, about a third of the reported increase can be attributed to the Russell Hill site in the ACT region. This increase occurred from 2005–06 to 2006–07. While the level of increase is not substantial, the cost of energy has risen significantly thereby increasing Defence’s total energy bill. This is illustrated in Figure 5.3.

Figure 5.3

Energy consumption and cost in Defence 2005–06 to 2007–08



Source: ANAO analysis of Department of Defence data

5.25 Given this increase, there is a strong case for Defence to consider accelerating its implementation of energy efficiency initiatives across the department if it is to contain expenditure in this area. A continuation of the cost trend will make previously marginal energy efficiency actions much more cost effective.

Sub-metering in Defence

Sub-metering enables Defence to determine the distribution of energy consumption across different building and facilities in a large site, identify high consuming facilities, anomalies and target corrective action. A lack of adequate sub-metering has been an ongoing challenge for the Defence estate, with facilities typically having only a single meter and data currently limited to gross monthly energy consumption totals. During the audit, Defence reported that it is in the early stages of implementing the sub-metering program as required under the EEGO policy. The pilot metering phase has been completed and trialled across 15 bases. Fifty-two bases (covering about 80 per cent of Defence energy use) have been targeted for sub-metering. By August 2008, about one per cent of the new meters had been rolled out. The sub-meter retrofit program is expected to be rolled out over two to three years, installing some 2 000 new sub-meters. Defence will also require a national reporting system to manage the data. Without a national reporting system, the information from the thousands of meters is likely to be of limited use in identifying agency-wide priorities for corrective action. Further work also needs to be done to allocate end use categories and develop performance indicators and targets for all bases.

Conclusion

5.26 While Defence has taken initial steps with its pilot projects and implementation of EEGO policy requirements, considerable progress remains to be made towards installing all new meters and in implementing a national reporting system for energy use data across Defence's diverse facilities. Defence commented to the ANAO during the course of the audit that, while progress was being made, there were tensions in progressing energy efficiency initiatives because of competing requirements for resources.

5.27 Defence's ability to meet the requirements set out in the EEGO policy will play a critical role if the Australian Government is to meet its energy

reduction targets by 2011–12. The need for sub-metering has been explicitly recognised by Defence as an important issue since 2002–03¹⁰⁸ and it will need to make a concerted effort over the remaining period of the EEGO policy. In particular, Defence will need to accelerate the implementation of its energy management strategy and increase the visibility of progress (and any impediments) within its governance framework.

Energy efficiency initiatives being undertaken by agencies

5.28 In 2005, the ANAO audit recommended that agencies introduce an energy management plan; conduct energy audits; and implement all energy conservation initiatives that are cost effective within remaining lease periods.¹⁰⁹ The ANAO also recommended that agencies consider joining the Government's Greenhouse Challenge Plus (GCP) program.¹¹⁰ GCP is a cooperative partnership between government and industry to improve energy efficiency, reduce greenhouse gas emissions, and integrate greenhouse issues into business decision-making.

5.29 The ANAO's survey of 63 agencies indicates that almost all agencies¹¹¹ have implemented at least some energy efficiency measures. Agency membership to the GCP program has slightly increased from 10 agencies in 2005 to 14 agencies in 2008. Throughout the course of the audit, Environment has advised that the program will continue until June 2009 but that no additional budget allocation has been included in the forward estimates beyond this date. Table 5.3 lists a range of major initiatives implemented by agencies, the percentage of office spaces that these initiatives cover and compares these results to those in the ANAO's 2005 survey.

¹⁰⁸ Department of the Environment, Water, Heritage and the Arts, *Energy Use in Australian Government's Operations 2002-03*, Canberra, 2004, p.258.

¹⁰⁹ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation 13, p.118.

¹¹⁰ *ibid.*, Recommendation 15, p.125.

¹¹¹ The Office of National Assessments and the Australian Institute of Marine Science were the only two agencies in the 2008 survey that did not identify that they had implemented energy saving measures.

Table 5.3**Comparison of energy efficiency initiatives undertaken in 2005 and 2008**

Energy efficiency Initiatives	2005	2008	2005	2008
	Per cent of agencies		Per cent of offices sites	
Energy Management Plans	39	54	30.6	52
Energy audit	54	55	20	36
Energy efficient lighting	47	71	21	16
Upgrading of heating, ventilation & air-conditioning	49	41	9	2
Passive solar	72	78	32	28
Timer switches	80	87	28	34
Sensor switches	63	81	22	9
Other steps	32	24	14	2

Source: ANAO survey responses, 2005 and 2008

5.30 Table 5.3 shows that an increased number of agencies have implemented a range of energy efficiency measures since 2005. There has been a particularly significant increase in the proportion of agencies implementing energy management plans and the sites covered by these plans. The proportion of agencies that have upgraded to energy efficient lighting has also improved. However, the percentage of sites to which energy efficiency measures (such as lighting), are applied is not extensive.

Energy management plans help agencies to achieve the targets

5.31 Energy management plans (EMPs) provide a strategic framework for concerted actions on energy efficiency at either an agency or portfolio-wide level. Ideally, they should be linked to the corporate EMS and are characteristic of the more energy efficient agencies such as Centrelink and Medicare Australia. The implementation of an EMP is an essential aspect of improving agencies' focus on reducing their energy consumption in order to meet the EEGO policy energy targets by 2011–12.

5.32 The ANAO analysis of 2008 survey results identified that 78 per cent of agencies meeting the OSC target of 400 MJ/m²/annum had implemented an EMP compared with 58 per cent of agencies that exceeded the previous target of 500 MJ/m²/annum. Similarly, 61 per cent of agencies that had already met the 2006 EEGO policy TLP target for 2011–12 of 7 500 MJ/person/annum had implemented an EMP. This result compared with 46 per cent of agencies that

continued to exceed the previous 10 000 MJ/person/annum target. Figure 5.4 illustrates the financial benefits from a strategic approach to energy management in Centrelink.

Figure 5.4

Centrelink's agency-wide energy conservation measures

Centrelink is implementing an agency-wide program of energy conservation measures (ECMs), which aim to upgrade 300 sites by June 2009. The first phase of the program comprising 220 sites had ECMs implemented between December 2005 and October 2007. The following results were recorded by Centrelink:

- 12.5 per cent reduction in electricity consumption at sites where ECMs have been implemented;
- energy savings for 200 sites of 531 839 kWh of electricity per month, 6 382 066 kWh per annum representing a saving of over \$1 021 000 per annum;
- approximately 6 400 tonnes in CO₂ emission reductions;
- 30 per cent of sites reduced consumption by more than 20 per cent, with 12 of these reducing consumption by over 40 per cent;
- 90 per cent reduction in maintenance work orders for lamp replacement following bulk re-lamping;
- 95 per cent reduction in the number of tubes changed after bulk re-lamping. (68 per cent of sites have not had a single lamp replaced following bulk relamping); and
- avoided maintenance costs of \$74 790 per annum at 67 sites - with extrapolated maintenance savings for all 220 sites estimated at almost \$250 000 per annum.

Centrelink advised that the average cost per site for implementation of the ECMs was approximately \$18 000 with a simple payback period of less than three years. Apart from the environmental benefits, these initiatives are important from a cost control perspective. However, even after introduction of these measures Centrelink's electricity costs increased by 13.9 per cent from 2006–07 to 2007–08 due to energy price rises.

Source: Centrelink, survey response, 2008

5.33 Medicare Australia has also made significant energy and financial savings by implementing agency-wide initiatives, such as powering down PCs and monitors, and more efficient use of lighting and air-conditioning operations. While these energy savings measures delivered considerable financial benefits during 2006–07, the impact has been much greater because of the electricity price increases between 60 per cent and 100 per cent in 2007–08, which effectively doubles the financial return of energy initiatives.

Energy audits identify cost effective energy savings

5.34 Energy audits are an important component of an energy management plan. These audits capture the distribution of energy consumption across a site, identify high use facilities and areas of inefficiency or anomalies. The most useful energy audits include analysis of end-use, trend and time series data,

and contain priorities, recommendations, actions and estimates of the costs involved and associated payback periods.

5.35 Energy audits can be particularly valuable in identifying billing anomalies. For example, in a recent energy audit, Comcare found a two-fold discrepancy between its energy use reported for whole-of-government purposes for 2006–07 and data from the audit. In conducting a whole-of-agency energy review, the Department of Agriculture, Fisheries and Forestry also found billing anomalies where the agency was not paying for all the energy consumption used at a particular site. In addition, 42 per cent of sites were not able to provide energy data for 2006–07. Other agencies have found that energy audits provide a means of identifying cost effective energy saving initiatives as illustrated in Table 5.4.

Table 5.4

Examples of energy and cost savings identified in agencies' energy audits

Initiative	Initial Cost (\$)	Energy cost saving (\$/pa)	Payback period (years)	Energy savings pa (kWh)
Geoscience Australia Resetting boiler settings	2 500	13 300	0.19	350 000
Department of Treasury Lighting upgrades & adjusting thermal settings	10 000	13 365	0.75	135 000
DEEWR ¹¹² Equipment shut down overnight	10 000	46 300	0.22	330 493
DBCDE ¹¹³ Upgrade lighting	1 200	1 391	0.86	15 000

Source: ANAO analysis of 2008 survey responses

5.36 Other agencies have identified longer payback periods that nevertheless are still worthwhile, especially given recent electricity price increases. For example, the Australian Broadcasting Corporation (ABC) commissioned an energy audit of its Ultimo facility in Sydney in 2007. The audit identified numerous opportunities for the ABC to save energy and

¹¹² Department of Employment, Education and Workplace Relations.

¹¹³ Department of Broadband, Communications and the Digital Economy.

reduce its costs. Overall, energy saving measures costing \$1 097 450 were identified for the facility. These measures were estimated to save \$192 464 per annum, representing a simple payback of 5.7 years (at current prices), and comprised savings of 2.1 million kWh of electricity, 580 GJ of gas and 900 kL of water per annum.

5.37 In early 2008, Defence conducted a 12-week pilot project at its Russell Offices (Russell Building 1) to demonstrate how facilities in the ACT/Southern NSW region can reduce energy. Successful results from the project included an adjustment of lighting and HVAC operational hours to match building occupancy; HVAC temperature adjustment, and behavioural change, including staff turning off monitors, appliances and office equipment. The project achieved an almost 15 per cent reduction in energy consumption over the period through targeted behavioural, building and equipment improvements and 'without significant impact on staff comfort.' The project report noted the importance of high-level management support for the project and credited some success of the project to visible support being maintained throughout the pilot.

Conclusion

5.38 While there is still two and a half years before the targets in the 2006 EEGO policy are scheduled to be achieved, there are significant environmental policy and cost priorities that suggest agencies need to give greater focus to achieving early results. Progress has been made since the 2005 audit and those agencies with a strong commitment have achieved positive results. Nevertheless, only a small number of agencies are performing well against these targets and there is still considerable effort required by many agencies if the Australian Government is to meet its overall energy target reductions by 2011–12.

5.39 With energy cost increases in the whole-of-government contract, there is a powerful incentive for agencies to produce results on time or even earlier than anticipated. The ANAO has estimated that the additional gross cost incurred by agencies not yet meeting the 2011–12 energy targets is \$17 million per annum. If this saving was applied more widely to the total electricity and natural gas consumption of the Australian Government, an estimated \$75 million per annum could be saved from the Australian Government's energy bill.

5.40 It is axiomatic that higher energy costs will result in shorter payback periods and greater returns for agencies. Agency-wide energy management plans and energy audits can help agencies to identify and prioritise areas of greatest energy efficiency gains in a cost-effective manner.

Recommendation No.5

5.41 To reduce energy consumption in Australian Government operations and improve compliance with Government policy, the ANAO recommends that agencies (where they have not already done so):

- (a) develop and implement an energy management plan that takes into account operational and management requirements across their property portfolio;
- (b) conduct energy audits, where appropriate, to determine high priority energy savings that can be made across the organisation; and
- (c) implement cost effective energy conservation initiatives within remaining lease periods.

Agencies' responses

5.42 All agencies agreed to or were supportive of this recommendation.

6. Sustainability in Buildings and Tenancies

This chapter examines the energy efficiency and environmental performance of Australian Government buildings and tenancies. It also explores issues arising from building design, leasing arrangements, refurbishments and construction waste.

Introduction

6.1 Building design and performance are critical considerations in promoting more sustainable development. In Australia, the commercial buildings sector accounts for ten per cent of national greenhouse gas emissions, and the fastest growth in emissions for any sector.¹¹⁴ Each year the construction industry contributes 44 per cent (by weight) of waste to landfill.¹¹⁵

Opportunities for emission reductions and cost savings

6.2 A number of recent studies have indicated that there are cost effective opportunities to reduce emissions in the building sector. A report by McKinsey and Company found that; 'by 2030, a total of 60 million tonnes of carbon reduction opportunities can be found in the building sector, all at low or negative cost.'¹¹⁶ A research report from the Australian Sustainable Built Environment Council Climate Change Task Group also found that:

...better designed commercial and residential buildings provide some of the most affordable forms of greenhouse gas (GHG) abatement in the economy. Significant gains are available now without the need to invent and apply new technologies.¹¹⁷

6.3 Integration of environmental initiatives early in the design phase has lasting cost effective benefits for the operation of the building. There is

¹¹⁴ Figure includes direct and indirect emissions for electricity consumption. Centre for International Economics, *Capitalising on the building sector's potential to lessen the costs of a broad based GHG emissions cut*, 2007, available from <www.thecie.com.au> [accessed 12 August 2008].

¹¹⁵ OECD, *Environmentally Sustainable Buildings: Challenges and Policies*, OECD Publishing, 2003, available from <www.oecd.org> [accessed 12 June 2008].

¹¹⁶ McKinsey & Company, *An Australian Cost Curve for Greenhouse Gas Reduction*, McKinsey & Company, 2007, available from <<http://www.mckinsey.com/client-service/ccsi/>> [accessed 16 February 2008].

¹¹⁷ Australian Sustainable Built Environment Council Climate Change Task Group, *The Second Plank-Building a Low Carbon Economy with Energy Efficient Buildings*, ASBE, 2008, available from <<http://www.asbec.asn.au/research>> [accessed 10 October 2008].

evidence that buildings designed to achieve high energy efficiency and meet industry better practice standards can be achieved with:

- minimal increase in capital cost (zero to five per cent)¹¹⁸;
- payback periods of approximately 10 years¹¹⁹; and
- significant productivity gains.¹²⁰

Building rating schemes

6.4 There are two types of nationally accredited building rating systems used in Australia. The schemes consider different aspects of building sustainability, and are outlined in Table 6.1.

Table 6.1

Australian building rating schemes

Scheme	Considerations	Rates	Administered by
NABERS Energy	Performance based rating scheme, which benchmarks a building's greenhouse impact on a scale of one to five, one star being the most polluting and five stars the least.	Energy performance	NSW Dept. of Environment and Climate Change
Green Star	Environmental rating scheme that evaluates the environmental design and achievements of buildings based on nine categories: management; indoor environment quality; energy; transport; water; materials; land use and ecology; emissions; and innovation.	Environmental design and performance	Green Building Council of Australia

Source: NSW Department of Environment and Climate Change and Green Buildings Council Australia.

6.5 Over the last decade, there has been a progressive movement in Australia towards more sustainable building design and construction. The proportion of the office property market that has been rated under the NABERS Energy scheme has increased from 14 per cent in 2005 to 39 per cent

¹¹⁸ L Williams, Davis Langdon, 'The Cost and Benefit of Green Buildings,' *RMIT Green Buildings and Design Conference*, RMIT, Melbourne, 16-17 April 2008.

¹¹⁹ Department of the Environment, Water, Heritage and the Arts, *ESD Design Guide*, Canberra, 2007, p 41, available from <www.environment.gov.au> [accessed 14 May 2008].

¹²⁰ Analysis by Sustainability Victoria of a corporate site in Victoria, 40 Albert Road, South Melbourne, shows productivity gains of up to 13 per cent accompanied by significant financial savings from reduced sick leave and lower attrition rates.

in 2008.¹²¹ State Governments have also been encouraging more sustainable building design. For example, in Victoria, new tenancies are required to meet a 5 NABERS Energy rating and 5 star Green Star rating.¹²²

Australian Government policy context

6.6 Australian Government agencies occupy approximately 13 per cent of the commercial office property market, covering 4.4 million square metres.¹²³ For the 12 months ending October 2008, the Australian Government spent over \$2.3 billion on building, construction and repair services.¹²⁴ The Department of the Environment, Water, Heritage and the Arts (Environment) administers the Government's energy policy and, in 2006, introduced the *Energy Efficiency in Government Operations (EEGO)* policy. The policy stipulates:

- a minimum standard of energy performance of 4.5 NABERS Energy rating for new buildings, new leases and major refurbishments over 2 000 square metres; and
- a new type of leasing arrangement, Green Lease Schedule (GLS), applicable to new leases over 2 000 square metres and for leases over two years.

6.7 There are no specific policy requirements for agencies in relation to construction materials, the management of waste from major refurbishments or building construction/demolition. Nevertheless, the ANAO also sought to examine the progress being made to reduce waste to landfill, as recommended in the ANAO's 2005 audit.

¹²¹ 8 1370 035 metres sq of base / whole buildings have been rated for their energy efficiency. Data sourced from NSW Department of Environment and Climate Change.

¹²² Victorian Government Department of Treasury and Finance; *Victorian Government Office Building Standards*; Department of Treasury and Finance, Melbourne, 2008, p.16.

¹²³ Department of the Environment, Water, Heritage and the Arts, *Energy Use in the Australian Government's Operations 2006-07*, Canberra, 2008, p.46.

¹²⁴ Department of Finance and Deregulation, AusTender, available from <www.tenders.gov.au> [accessed 27 October 2008].

Progress towards meeting EEGO policy requirements

Achieving 4.5 NABERS Energy rating

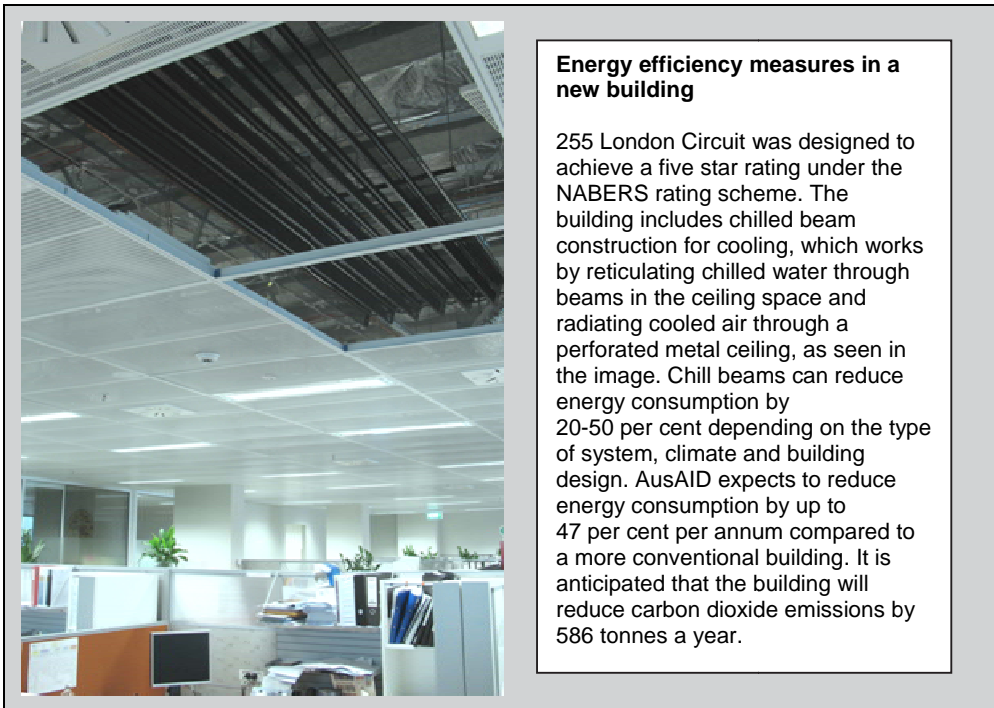
6.8 The audit examined preliminary data from a sample of the Government's new buildings/tenancies¹²⁵ completed within the last three years. These buildings were designed to achieve at least a 4.5 NABERS Energy rating, as directed under the EEGO policy. The ANAO sought to assess whether a building designed to meet the energy performance standards actually met the intended specifications.

6.9 In assessing performance against the EEGO policy, there was very limited data available to provide an indication of actual performance in new buildings and tenancies, as only a small number of new buildings or tenancies are completed each year. However, preliminary data of new buildings designed to achieve 5 NABERS Energy Rating indicated the following positive results:

- the ATO building in Canberra is operating slightly better than the intended 5 star rating for the first six months of full occupancy; and
- the AusAID building is performing between a 4.7 and 4.8 rating for the first 12 months of full occupancy.

6.10 In conjunction with modified user behaviour, agencies are utilising integrated design features (such as sensor and zoned lighting, enhanced natural lighting and passive solar design) to achieve high operational energy efficiency. AusAID's current tenancy is in a new building, which used chilled beams construction, an alternative to conventional air conditioning systems. This measure is expected to deliver a significant reduction in energy consumption, as outlined in Figure 6.1.

¹²⁵ Agencies involved in this part of the audit were the Department of the Prime Minister and Cabinet, the Australian Taxation Office (ATO), AusAID; Medicare Australia and the Department of Defence. The ANAO also examined multiple tenancies in a building in Adelaide for the ATO, Australian Bureau of Statistics, Department of Families, Housing, Community Services and Indigenous Affairs, and Department of Health and Ageing.

Figure 6.1**AusAID's tenancy—255 London Circuit, Canberra ACT**

Source: AusAID, *Annual Report 2007–08*, p.278 and Building Design and Construction, 'Chill the ceiling and achieve cool energy savings,' available from <www.bdcnetwork.com> [accessed 15 November 2008].

6.11 Data from the 2008 ANAO survey, supported by annual reports, also indicates that agencies are generally seeking to achieve at least a 4.5 NABERS Energy rating.

Green Lease Schedules—new leasing arrangement under the EEGO policy

6.12 The primary objective of a Green Lease Schedule (GLS) is to achieve energy efficiency and environmental outcomes by formally placing legal obligations on the tenant and the landlord. The GLS contains five standard clauses:

- an agreed 4.5 NABERS Energy rating;
- separate digital metering;
- an energy management plan;

- a building management committee; and
- a clause for dispute resolution.

6.13 These clauses are designed to facilitate implementation and ongoing compliance with the relevant energy performance standard by creating a practical arrangement and a legally binding agreement between a landlord and a tenant. While Environment does not keep records of the number and distribution of GLSs by Government agencies, the ANAO survey data indicated that 25 of the 63 agencies surveyed (40 per cent) have at least one GLS in place. The total number of GLSs in place accounts for 41 sites or nearly two per cent of total sites captured in the audit survey.

6.14 GLSs require an accredited NABERS Energy rating after the first 15 months of occupancy. Currently, it is too early to make conclusive comments regarding the effectiveness of the GLS in delivering measurable environmental outcomes. The first GLS put in place by the department of the Prime Minister and Cabinet (PM&C) in early 2007, is taking longer than expected to fully implement and PM&C staff commented that a two year commissioning period may be a more realistic timeframe. PM&C has indicated that the assessment process began in July 2008.¹²⁶ However, Medicare Australia has two tenancies with GLSs in place, where preliminary data indicates performance between a 4.5 and 5 NABERS Energy rating.

Potential benefits of Green Lease Schedules

6.15 Environment advised that a National Green Lease Policy (NGLP) is currently being developed to establish a nationally consistent green lease policy framework. Australian, State and Territory governments are major lessees with approximately 35 per cent of the total commercial office space. The majority of the Australian Government's estate is comprised of leased tenancies which, from the ANAO's survey data, accounts for 84 per cent of agency sites. Given the large coverage of the Australian Government's property portfolio and with the majority in leasing arrangements, GLSs have the potential to facilitate energy and emission reductions.

¹²⁶ Department of the Prime Minister and Cabinet, Annual Report 2007-08, p.111.

Progress in implementing the 2005 audit recommendations

6.16 The 2005 audit report recommended that agencies consider an appropriate energy rating scheme and develop an efficiency target for their property portfolio.¹²⁷ The purpose of the recommendation was to encourage agencies to consider the overall performance of their property portfolio and pursue opportunities to target cost effective energy efficiency measures on a whole of agency basis. Forty-three agencies agreed with or were supportive of this recommendation.

Energy efficiency ratings for property portfolios

6.17 The 2008 survey data indicated that 26 agencies (41 per cent) have at least one site had been assessed using the nationally accredited NABERS Energy scheme. The total number of assessed sites was 55, which accounts for only 2.4 per cent of total agency sites captured in the survey. The majority of these assessments were for tenancies but a small number of sites were for base buildings¹²⁸. Agencies tended to rate and report only better performing sites using the NABERS Energy rating scheme¹²⁹ and were reluctant to measure and report on poor performing sites.

6.18 Centrelink is performing well in managing its property portfolio strategically to conserve energy and greenhouse gas emissions and reduce costs. Centrelink's average NABERS Energy rating for the property portfolio has increased from 2.7 in 2004 to 3.2 in 2007. This contrasts with agencies such as the Department of Agriculture, Fisheries and Forestry and Defence where metering and energy measurement problems highlighted in the previous Chapter have constrained the capacity of these agencies to target areas for improvements.

Common issues facing buildings and tenancies

6.19 The actual performance of a new building or tenancy can be at odds with the intended design, particularly in the first year or two of occupancy. Throughout the course of the audit, discussions with building managers

¹²⁷ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 14, p. 123.

¹²⁸ Base building refers to the building's primary structure; the building envelope; public circulation (lobbies, corridors, elevators and public stairs), in addition to primary mechanical and supply systems (heating, air conditioning and utilities).

¹²⁹ Agencies reported a mixture of self-assessed and accredited NABERS Energy assessments.

focused on the challenges during the commissioning phase. Common problems included: issues of inaccurate metering; difficulties with the management of heating, ventilation and air conditioning (HVAC) systems; and lighting and thermal controls. Examples noted during the course of the audit included:

- a post occupancy study of a building at a Defence RAAF base found that gas consumption was erratic, the metering was inconsistent and the annual projected energy figure was 34 per cent above the Green Star simulation estimate;
- Department of Health and Ageing advised that the electricity meters at its tenancy in Adelaide were installed incorrectly and, as a consequence, there was no electricity data for over a year; and
- Medicare Australia commented that, at a Melbourne site, energy data was incomplete because of the omission of three floors of data from the electricity service provider's billing system.

6.20 These examples highlight the importance of agencies giving sufficient attention to the on-going management of building utilities and system controls.

Opportunities for further improvements

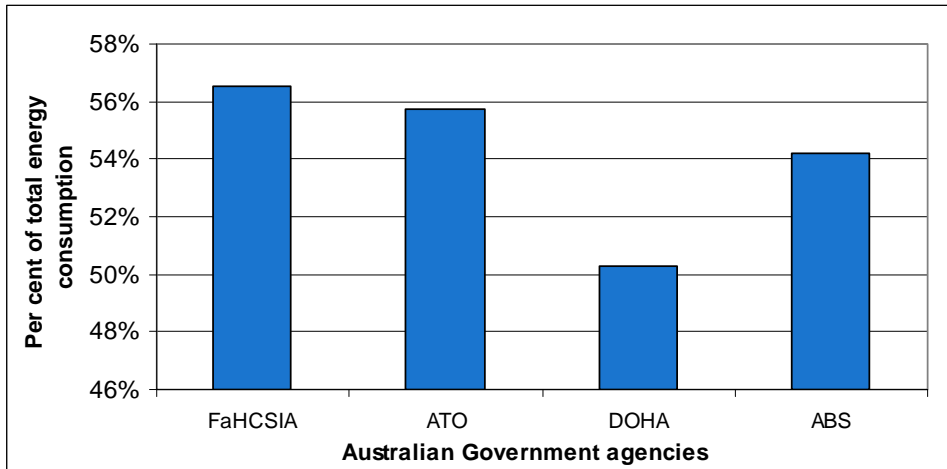
6.21 A key point in ensuring that a building (or tenancy) achieves its intended energy performance rating is putting in place appropriate management controls – especially in terms of out-of-hours energy use. Simply upgrading lighting and other building systems will not generally be sufficient to achieve a good outcome. This was illustrated from preliminary data from a building in Adelaide, which accommodates four Australian Government agencies.¹³⁰ The building was designed to achieve a 5 NABERS Energy rating. Preliminary data from this site indicated that three of the four tenancies were operating at approximately 4.5 - 5 star rating and the fourth tenancy was performing at 5 stars. Despite performing well, there are further energy and cost reductions to be made at this site. An energy audit of the building found

¹³⁰ Australian Bureau of Statistics (ABS), Australian Taxation Office, Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA), and the Department of Health and Ageing (DOHA).

that in all four tenancies over 50 per cent of total energy consumed occurred during non-business hours¹³¹, as shown in Figure 6.2.

Figure 6.2

Non-business hours energy consumption of total energy consumption



Source: Data provided courtesy of Baulderstone Hornibrook; October 2008

6.22 The after hours use was attributed to electricity consumption from lights, computers and data centres. By implementing energy efficiency measures, such as adjusting power settings, implementing zoned lighting, enabling PC shutdowns at night (as discussed in Chapter 3) and improving staff awareness, agencies could further lower their energy consumption at this site and consistently achieve a 5 star (or better) energy efficiency rating.

6.23 There is a need for agencies to explicitly recognise and manage the diverse parties who have access to, or use Australian Government buildings. These parties include staff, security, cleaners, contractors and other service providers; all of whom can impact on energy use. Appropriate strategies need to address user behaviour so that energy consumption and environmental impacts are minimised. For example, the ATO was informed by a member of the public that lights in the new Canberra building were left on at 1:00 am. In following up this inquiry, an investigation found that security guards on their nightly patrols were activating motion sensors and turning the lights on. To overcome a similar issue, the Australian Bureau of Statistics (ABS)

¹³¹ Non business hours are 7:00 PM – 7:00 AM on weekdays and includes the weekends.

implemented 'daylight' cleaning, between 3:00 and 5:00 pm, at all regional sites. This initiative was undertaken to remove the need for additional security staff to accompany cleaners after hours. The ABS commented that the initiative has had beneficial secondary impacts of reduced energy consumption and lower operating costs.

Conclusion

6.24 The ANAO's audit findings indicate that agencies can achieve high energy efficiency in buildings and tenancies by embedding environmental considerations in the design phase. Establishing an ongoing building management commitment to address user behaviour would further strengthen performance. There are many opportunities in buildings and tenancies to reduce energy consumption and greenhouse gas emissions. However, there are also factors that can limit performance improvements such as inaccurate metering and the lack of measures to engage all relevant parties in building management. Green Lease Schedules have been designed to address these constraints and consequently, there are potential benefits from more widely applying this leasing arrangement.

Major construction, refurbishments and fit outs

6.25 Each year the construction industry contributes 44 per cent (by weight) of waste to landfill.¹³² Currently, there is no Australian Government policy or legislative requirement for agencies to integrate environmental considerations such as recycling building materials or using recycled material into construction or refurbishment projects.¹³³ This approach contrasts with the Victorian Government Office Building Standards (2008) that require a plan to minimise waste during construction.¹³⁴ The 2005 audit recommended that agencies conduct whole-of-life cycle assessments for building construction,

¹³² OECD, *Environmentally Sustainable Buildings: Challenges and Policies*, OECD Publishing, 2003, available from <www.oecd.org> [accessed 12 June 2008].

¹³³ However, the EEGO policy specifies a minimum 4.5 NABERS Energy for refurbishments over 2 000 square meters and various other provisions for projects under 2 000 square meters.

¹³⁴ Victorian Government, Department of Treasury and Finance; *Victorian Government Office Building Standards*; Melbourne, 2008, p.13.

office refurbishments and fit outs and explicitly include environmental impacts.¹³⁵

6.26 From the ANAO's audit survey, 28 agencies (compared with 42 agencies in 2005) have undertaken at least one refurbishment in the last 12 months, for a total of 189 refurbishments covering 343 245 square metres. In 2005, the total number of refurbishments was 268 covering 267 351 square metres. The average floor space of refurbishments increased from 1 031 square metres in 2005 to 1 816 square metres in 2008.

Environmental considerations in construction materials

6.27 Table 6.2 outlines the percentage of respondents in 2005 and 2008 with provisions in tenders and contracts to use sustainable materials in refurbishments.

Table 6.2

Comparison of respondents with provisions in tenders and contracts to use sustainable materials in refurbishments in 2005 and 2008

Types of Materials	2005	2008
	Per cent of agencies	
Use of recycled materials	31	48
Use of recyclable construction materials	21	42
Use of natural materials	24	45
Preference for lower embodied energy materials	21	45
The exclusion or limitation of toxic materials	45	62
Other – eg low VOC ¹³⁶ paint	12	17
Agencies undertaking refurbishments	42	29

Source: ANAO survey responses, 2005 and 2008.

6.28 The survey data shows a general improvement in more sustainable building and refurbishment practices since 2005. Despite not having completed a refurbishment project in the last twelve months, 13 other agencies reported having provisions in place for tenders or contracts to make use of environmentally sound building materials. PM&C advised that more

¹³⁵ ANAO Audit Report No.22 2005–06, *Cross Portfolio Audit of Green Office Procurement*, Recommendation No. 10, p. 95.

¹³⁶ Volatile organic compounds.

sustainable practices were followed (in terms of recycling the old materials) when demolishing its old building. The project was able to achieve an 83 per cent recycling rate, diverting 546 tonnes of material from landfill.

Construction and demolition waste

6.29 While the PM&C example illustrates a positive outcome in terms of sustainability, the ANAO survey suggests that the sustainable management of refurbishment and construction waste is generally not a priority for many agencies. The 2008 survey data indicated that only:

- 13 agencies (21 per cent) had provisions for minimising and/or recycling of waste generated in their contracts for refurbishments, which has decreased from 31 per cent in 2005;
- two agencies (Airservices Australia and Department of Veteran Affairs) were able to provide estimates of the amount of waste going to landfill from the refurbishments. This figure was similar to 2005 when only three agencies provided estimates; and
- two agencies (Defence and the National Health and Medical Research Council) recorded the percentage of waste material that was recycled from refurbishments.

6.30 A small number of agencies have also developed policies or guidance to achieve more consistent practices. For example, Medicare Australia has developed *Environmental Guidelines for Office Refurbishments and Relocations*, which outline general principles, the types of materials to be used and a waste management strategy. Defence has developed a comprehensive building, construction and design guide, the 'Green Building Toolbox' to complement its Green Building Policy.¹³⁷ This guide includes a whole of life cycle costing tool and a materials guide. Both these guidelines are good practice as they embed environmental considerations into projects from the design to the completion phase.

¹³⁷ Defence spent \$1.98 billion on building, construction and repair services in 2007–2008. The department accounts for approximately 80 per cent of submissions received by the Parliamentary Committee on Public Works and 82 per cent of total Australian Government expenditure in this area.

Conclusion

6.31 If the Government is to be at the forefront of more sustainable practice in this area, the absence of any whole-of-government guidance needs to be addressed by Environment, through developing guidelines for office refurbishments that set required environmental standards and practices to minimise waste going to landfill. Consideration should also be given to implementing, on a whole of government basis, the requirement to have a waste minimisation plan for refurbishments over 2 000 square metres.

Recommendation No.6

6.32 To improve the sustainability of Australian Government operations, the ANAO recommends that the Department of the Environment, Water, Heritage and the Arts in consultation with other agencies:

- (a) develops and disseminates guidance for office refurbishments that set required environmental standards and practices to minimise waste going to landfill from Australian Government refurbishments; and
- (b) considers introducing a standard requirement for agencies to have a waste minimisation plan for refurbishments over 2 000 square metres.

Agencies' responses

6.33 All agencies agreed to or were supportive of this recommendation.

7. Sustainability Reporting

This chapter outlines the reporting requirements for ecologically sustainable development in agencies annual reports. Sustainability reporting and guidance to agencies is also discussed.

Introduction

7.1 Public reporting is an essential component in promoting greater accountability of Australian government agencies. In addition to the energy and waste reporting discussed in earlier chapters of this report, mandatory environmental reporting is required under section 516A of the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act).

Reporting requirements under s516A EPBC Act

7.2 Agencies are required by the EPBC Act to report on two areas of ecologically sustainable development (ESD) and three environmental management issues in their annual reports as outlined in Table 7.1.

Table 7.1

Reporting requirements under EPBC Act s516A

	EPBC 516A	Requirement
Ecologically sustainable development (ESD)	(a)	how the activities of, and the administration (if any) of legislation by an agency accord with the principles of ESD ¹³⁸ ;
	(b)	how the outcomes (if any) specified in an Appropriation Act contribute to ESD;
Environmental management	(c)	the documentation of the effect of an agency's activities on the environment;
	(d)	the identification of any measures taken to minimise the impact of agency activities on the environment; and
	(e)	the identification of mechanisms (if any) for reviewing and increasing the effectiveness of those measures.

Source: *Environment Protection and Biodiversity Conservation Act 1999*

7.3 The annual reporting requirements issued by PM&C note the mandatory nature of s516A reporting requirements. More detailed guidance

¹³⁸The EPBC Act s3A sets out five principles of ESD. These relate to: integrated decision-making; the precautionary principle; intergenerational equity; the conservation of biodiversity and ecological integrity in decision-making; and improved valuation, pricing and incentive mechanisms.

and generic ESD and environmental performance indicators are provided to agencies by Environment. The extent and usefulness of this guidance is discussed later in this chapter.

Previous audit coverage and reviews

7.4 The ANAO examined whether improvements had been made in the quality of agencies' environmental annual reporting since two previous ANAO audits in 2002–03 and 2005–06. The Senate Standing Committee on Finance and Public Administration also examined agency environmental performance reporting in March 2008.

Audit Report No. 41 2002–03 Annual Reporting on Ecologically Sustainable Development

7.5 The ANAO assessed Annual Reporting on Ecologically Sustainable Development in report No.41; 2002–03. This audit found:

there is considerable scope for improvement in relation to the quality of agencies' annual reports; especially in relation to compliance with the EPBC Act and articulating agencies' contribution to broader ESD outcomes.¹³⁹

7.6 The audit report made three recommendations to the then Department of the Environment and Heritage aimed at enhancing the quality, depth and dissemination of guidance for reporting by agencies as well as improving the consistency of reporting across Australian Government agencies. Particular emphasis was to be given to the development of core performance indicators, templates and compliance checklists.

Audit Report No.22 2005–06, Cross Portfolio Audit of Green Office Procurement

7.7 In the 2005–06 audit, the ANAO identified challenges facing agencies in meeting the requirements of s516A of the EPBC Act. In particular, the report found that, while 80 per cent of the 71 agencies surveyed identified measures they were taking to minimise the impact of their actions on the environment, only 41 per cent reported that they had documented the effect of their procurement actions on the environment.¹⁴⁰ In 2005–06, two agencies had

¹³⁹ ANAO Audit Report No.41 2003–04, *Annual Reporting on Ecologically Sustainable Development*, p. 15.

¹⁴⁰ ANAO Audit Report No.22 2005–06, *Cross Portfolio of Green Office Procurement*, p. 62.

completed Triple Bottom Line Reports¹⁴¹ and eleven agencies were considering such reporting.

Senate Committee review of annual reports

7.8 As previously noted, the Senate Standing Committee on Finance and Public Administration examined agency environmental performance reporting in March 2008 giving particular consideration to requirements (c) and (d) of s516A of the EPBC Act.¹⁴² The Committee highlighted a number of examples of inadequate documentation where a common feature was ‘the lack of sufficient information and numerical data to be able to understand the agencies’ actual effect on the environment.’ Furthermore, poor reporting was characterised as providing ‘descriptive information about environmental programs rather than detailing specific effects on the environment.’¹⁴³

Analysis of reporting in 2006–07 annual reports

7.9 An analysis of 65 2006–07 annual reports (based on departmental structures prior to the 2007 election) has identified that there is a wide range of information reported by agencies with little consistency or focus on common performance activities across agencies. The depth of analysis and information in each report varied from minimal compliance to well developed better practice. One agency, Comcare, did not provide a report against any of the mandatory ESD or environmental performance requirements in 2006–07.

Ecologically sustainable development reporting requirements

7.10 There was considerable variation in complying with ESD reporting requirement (a) – how the activities of, and the administration (if any) of legislation by an agency accord with the principles of ESD. The ANAO found that:

- 31 agencies (48 per cent) did not reference ESD principles;

¹⁴¹ A Triple Bottom Line Report is an integrated approach to reporting on social, economic (including financial) and environmental outcomes against established benchmarks.

¹⁴² The Senate Standing Committee on Finance and Public Administration, *Annual Reports*, Commonwealth of Australia, 2008, <http://www.aph.gov.au/senate/committee/fapa_ctte/annual/2008/report1/index.htm> [accessed 17 June 2008].

¹⁴³ *Ibid.*, p.27.

- 23 agencies (35 per cent) made a vague or imprecise reference to ESD but did not connect their activities to the principles; and
- 11 agencies (17 per cent) articulated a specific connection between their activities and the principles of ESD.

7.11 Understandably, those agencies with a more explicit environmental or natural resource management function tended towards better practice on this requirement. For example, the Great Barrier Reef Marine Park Authority listed over thirty different activities that relate to the five principles of ESD. However, agencies with no significant role in environmental or natural resource management policy or program delivery also met this requirement with an explicit reference to ESD. For example, the Attorney General's Department reported that 'its activities are consistent with the first of the ESD principles...(but) its activities have less direct relevance to the remaining principles.'

7.12 All public service agencies procure goods and services, consume energy, water and paper and produce waste. Activities are defined in the EPBC legislation as:

- developing and implementing policies, plans and programs and legislation; and
- the operations of a department, authority, company, or agency referred to in this section.

All agencies undertake some activities relevant to the principles of ESD and consequently, should give consideration (where they are not already doing so) to articulating the connection between their activities and the principles of ESD.

7.13 In reporting towards ESD requirement (b) – how the outcomes (if any) specified in an Appropriation Act contribute to ESD had similar limitations. The ESD Reporting Guidelines provided by Environment advise that 'if none of your Appropriations Outcomes have any ESD implications, your report against (s.516A(6)(b)) should simply state this.'¹⁴⁴ The ANAO's analysis took this guidance into account and identified that:

¹⁴⁴ The then Environment Australia, ESD Reporting Guidelines, Canberra, 2003, <<http://www.environment.gov.au/epbc/publications/esd-guidelines.html>> [accessed 5 May 2008].

- 10 agencies (15 per cent) made explicit reference to environmental and/or ESD implications in their agency outcomes. However, only four of these agencies¹⁴⁵ reported against this EPBC Act requirement in their annual report; and
- 55 agencies (85 per cent) did not state whether their outcomes were directly relevant to ESD or otherwise.

7.14 On this basis, the ANAO concluded that the vast majority of agencies did not meet the reporting requirement. More positively, a small number of agencies recognised their relevance and (sometimes indirect) contribution to ESD principles despite not having explicit environmental or ESD functions in their agency outcomes. These agencies were the National Health and Medical Research Council, Bureau of Meteorology, Australian Bureau of Statistics, the Department of Health and Ageing and the National Museum of Australia.

7.15 The variance and poor compliance of reporting under this requirement would suggest that there is some confusion among agencies as to the content and extent of reporting required. Audit Report No. 23 2006–07 *Application of the Outcomes and Outputs Framework* concluded that agencies often found it challenging to implement all the required elements of reporting. Clearer and more specific guidance is needed to assist agencies in meeting their reporting obligations under s516A of the EPBC Act.

Environmental management reporting requirements

7.16 The remaining three s516A annual reporting requirements, ((c), (d) and (e) in Table 7.1), refer directly to an agency's environmental management. Agencies' compliance was higher than for the first two requirements, with all but one agency, Comcare, demonstrating at least minimal compliance. The ANAO found:

- 52 agencies (80 per cent) gave insufficient attention to the effect of the agency's activities on the environment;
- 28 agencies (43 per cent) demonstrated good or better practice in identifying measures undertaken to minimise environmental impact; and

¹⁴⁵ Australian Fisheries Management Authority, the then Department of the Environment and Water Resources, Great Barrier Reef Marine Park Authority and the then Department of Industry, Tourism and Resources.

- 23 agencies (35 per cent) demonstrated good or better practice in identifying mechanisms for reviewing and increasing the effectiveness of measures.

7.17 The ANAO's findings are consistent with those of the 2008 report from the Senate Standing Committee on Finance and Public Administration. There is significant scope for improvement under the three 516A reporting requirements, particularly in small and medium-sized agencies. While larger agencies can potentially have a greater impact on the environment, they generally also have an increased capacity to report and monitor environmental impacts.

7.18 Larger agencies generally produced more in-depth reporting of environmental issues and provided examples of better practice. They also included statistical data to support their performance and report against targets or trends over time.¹⁴⁶ Operational data on energy, water and recycling and details of environmental initiatives were provided in the Centrelink and Medicare Australia reports. The Australian Customs and Border Protection Service reported data of vehicle fuel use, energy consumption and greenhouse gas emissions trends since 2003–04. It also provided information of progress towards environmental goals, including completed tasks and outstanding objectives. This approach is good practice as it provides a balanced snapshot of both positive and negative environmental impacts, and informs Parliament and the public of the agency's progress towards achieving environmental objectives.

Analysis of reporting in 2007–08 annual reports

7.19 In order to provide a report on current annual reports and any changes from 2006–07, the ANAO also reviewed the 2007–08 annual reports of the nine agencies involved in the more detailed validation process. Particular areas for improvement were highlighted, especially for those agencies struggling to meet reporting requirements. The nine agencies' annual reports from 2007–08 indicated that:

- Centrelink demonstrated better practice with a comprehensive report on progress towards numerous sustainability initiatives, substantiated with

¹⁴⁶ Only 10 agencies (15 per cent) provided statistical data to support their performance and report against targets or trends over time.

statistical and time trend data. The 2007–08 report was more detailed and informative with important quantitative performance measures against agency targets and objectives;

- Medicare Australia, Australian Taxation Office, Defence, Airservices Australia and the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) all produced well documented reports that highlighted their performance in ESD and in environmental management;
- AusAID and Comcare significantly improved their performance from the previous reporting year. Both agencies struggled to meet the mandatory reporting requirements in 2006–07. In 2007–08, these agencies addressed the five reporting requirements separately. AusAID also included four years of trend data covering energy and greenhouse gas emissions; and
- reporting by the National Gallery of Australia in 2007–08 remains poor. Similar to 2006–07, it provides very limited information against each reporting requirement, with no indicators of actual environmental performance.

7.20 Similar to 2006–07, there was wide variance in the quality of agency reports in 2007–08, varying from comprehensive better practice to minimal compliance. The ANAO considers that there is significant scope for improvements in the quality and consistency of annual reports. With the assistance of clear guidance, agencies, such as Comcare and AusAID, have demonstrated significant improvements in the quality of reporting can be achieved.

Sustainability reporting

7.21 While not a requirement, some agencies such as Environment, FaHCSIA, Medicare Australia and the Department of Parliamentary Services¹⁴⁷

¹⁴⁷ Since 2003-04 the Department of Parliamentary Services (DPS) has produced an annual 'Environmental Performance Report' based on guidelines from the Global Reporting Initiative (GRI). In their annual report of 2007-08, DPS has included an Environment and Heritage chapter, which is based on the GRI indicators.

have produced separate sustainability reports. These reports are based on the Sustainability Reporting Guidance set out by the Global Reporting Initiative.¹⁴⁸

7.22 Sustainability reports contain information on agency operations and consumption in the areas of materials, energy, water, biodiversity, emissions, effluents and waste, products and services, compliance, transport and overall environmental considerations. The reports use core and additional standardised performance indicators in metric units and track environmental performance trends over time. The use of standardised indicators and categories of reporting allows comparative analysis between organisations and enhances the accessibility and accountability of agency reporting. For example, the sustainability reports mentioned above included metrics on water usage (kL), waste to landfill (tonnes) and electricity consumed (GJ), thereby allowing comparison across those agencies.

Section 516A guidance materials for reporting

7.23 In 2003, following the ANAO's Audit Report No. 41, the then Environment Department produced suggested *ESD Reporting Guidelines*¹⁴⁹ to assist agencies in meeting their s516A reporting requirements. In general, the ANAO considers that the guidance material provides useful information and suggestions to assist agencies. However, there is little consistency regarding the use of indicators to report agency environmental performance.

7.24 This is reinforced by the *ESD Reporting Guidelines*, which suggest that establishing their own organisation-specific environmental indicators will assist organisations that wish to assess their environmental effects. While this approach caters for the wide variance in size and function in Australian Government agencies, it does not foster a consistent approach in reporting against s516A and limits the ability to compare agencies.

¹⁴⁸ The Sustainability Reporting Framework provides guidance for organisations to use as the basis for disclosure about their sustainability performance, and also provides stakeholders a universally-applicable, comparable framework in which to understand disclosed information. Global Reporting Initiative, available from <<http://www.globalreporting.org/ReportingFramework/G3Guidelines/>> [accessed 20 May 2008].

¹⁴⁹ The then Environment Australia, *ESD Reporting Guidelines*, Environment Australia, Canberra, 2003, <<http://www.environment.gov.au/esd/national/epbc/guidelines/index.html#download>> [accessed 5 May 2008] The guidelines are supported by two associated documents - *Criteria for Determining ESD Relevance* and *Generic ESD and Environmental Performance Indicators for Commonwealth Organisations*.

Development of performance indicators

7.25 The ANAO considers that, while current reporting guidance is useful, it could be strengthened to include standardised metric indicators of agency environmental performance. The development of a core set of mandatory performance indicators would ensure a more comprehensive and systematic approach to reporting. The benefits of this approach are apparent in the sustainability reports of agencies where the Global Reporting Initiative has provided a standardised model for reporting. Inclusion of core mandatory indicators will enhance accountability by ensuring that agencies are publicly reporting information relevant to their environmental performance and implementation of ESD. In addition, comparative analysis across agencies, the benchmarking of agency environmental performance and, eventually, whole of government sustainability reporting could be undertaken.

Recommendation No.7

7.26 To enhance the consistency and comprehensiveness of the annual reporting required under section 516A of the *Environment Protection and Biodiversity Conservation Act 1999*, the ANAO recommends that the Department of the Environment, Water, Heritage and the Arts revise the guidance material provided to agencies and include core mandatory performance indicators for operational environmental impacts in key areas such as energy, water and waste.

Agencies' responses

All agencies agreed to or were supportive of this recommendation.



Ian McPhee
Auditor-General

Canberra ACT
11 March 2009

Appendices

Appendix 1: Agency responses



AIRSERVICES AUSTRALIA

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Mr Matt Cahill
Group Executive Director
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Australian National Audit office
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MC
2011

Dear Mr Cahill

Audit on Green Office Procurement and Sustainable Office Management

Thank you for your letter of 19 December 2008 requesting comments on the audit report on Green Office Procurement and Sustainable Office Management.

We have examined the report and wish to make the following comments:

- The chapter on 'Water consumption and conservation', section 4.29, indicates that Airservices is a large water user. However, we are not aware of data that demonstrates Airservices is a large consumer of water in regard to office buildings in comparison to other government agencies. Where water suppliers have directed businesses and non-residential customers to reduce water consumption, the thresholds to implement change are not solely dependent on volume of water use, but also includes the type of business activity and infrastructure used on site such as cooling towers. Accordingly, Airservices considers that section 4.29 is misleading and should be amended as follows:

"However, many water suppliers around Australia have required their non-residential customers and businesses, including government agencies such as CSIRO and Airservices Australia, to minimise their water use in recent years.

Airservices is supportive of the report's recommendations to improve the sustainability practices of government agencies.

Yours sincerely

Richard Dudley
General Manager
Corporate Affairs

27 January 2009

airspace | airside | AIRSERVICES AUSTRALIA

www.airservicesaustralia.com



Australian Government
Attorney-General's Department

Corporate Services Group



6 February 2009

*MCC
12/2*

Mr Matt Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601

Dear Mr Cahill

ANAO Draft Report: Green Office Procurement & Sustainable Office Management

I refer to your letter of 19 December 2008 to the Secretary of the Attorney-General's Department, Mr Roger Wilkins AO, requesting comments on the ANAO draft report on Green Office Procurement and Sustainable Office Management.

The Attorney-General's Department notes, and agrees with, the recommendations and observations made in relation to the Department at the following sections of the draft report:

- Section 2.18 (non-implementation of an Environmental Management System)
- Section 3.13 (steps to reduce paper use)
- Section 5.14 (likely improvement to light and energy efficiency in new AGD building).

In relation to Section 2.18 of the draft report, please note that in April 2009, AGD will be moving into its new accommodation at 3-5 National Circuit, Barton, and that an Environmental Management System is being developed which will reflect energy efficiencies within our new environment.

The action officer for this matter is Tony Pead who can be contacted on (02) 6250 6744.

Please accept my apology for the delay in providing you with this response.

Yours sincerely

Sue Chapman
General Manager
Corporate Services Group

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Australian Government
AusAID

Mr. M Cahill
Group Executive Director
Australian National Audit Office
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*MLG
28/1*



Dear Mr Cahill,

ANAO's Report on Green Office Procurement and Sustainable Office Management Audit

I refer to your letter dated 19 December 2008, regarding the Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management.

Please find attached:

- AusAID's formal comments on the proposed report; and
- responses to the audit's recommendations.

Should you have further questions, please do not hesitate to contact Mr Scott Ward on 02 62064607.

Yours Sincerely,

Jamie Clout
Deputy Director General,
Corporate Enabling Division

23 January 2009

**AusAID's Formal Comments on the
Proposed Australian National Audit Office's report on
Green Procurement and Sustainable Office Management Audit**

AusAID acknowledges the findings of the Green Procurement and Sustainable Office Management Audit and agrees with all recommendations.

AusAID completed the development of its Environmental Management System (EMS) at the end of the 2007–2008 Financial Year. The Agency has made significant improvements in its environmental management and performance. In addition to the completion of the development of the EMS itself, other improvements include:

- Discontinuation of the use of virgin paper, in favour of recycled paper. AusAID now uses copy paper with at least 60% recycled content;
- Reduction of its per person/Mega Joule energy consumption by about 34%, down from 8,019MJ in the 2006–2007FY, to 5,298MJ in the 2007–2008FY;
- Reduction of its total annual energy consumption by about 30% down from 1,499,069 kWh in the 2006–2007FY to 1,056,784 kWh in the 2007–2008FY;
- Authored its 2007–2008FY Annual Ecologically Sustainable Development Report to fully comply with the requirements of Section 516A of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth);
- Shutting down desktop computers and monitors overnight and on weekends; and
- Benchmarking of water and energy usage in order to establish baseline data for future measurement.

AusAID is making efforts to improve environmental outcomes on a continuous basis. The Agency is in the planning process of setting achievable environmental targets to facilitate the implementation of AusAID's EMS. The Agency will take opportunities to improve its environmental impact as they arise, by identifying and developing environmental synergies through the procurement and tendering process, internal awareness programs to all staff regarding environmental issues and promoting 'green' design in Information and Communication Technology (ICT) refresh, and refits.

Like other agencies, AusAID endeavours to make efforts to improve its environmental impacts, through existing resources and in the context of meeting other unfunded activities. In this context, agencies need to focus on practical environmental initiatives prioritised according to cost-benefit potential.



Australian Statistician

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Dear Mr Cahill

Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management

I am writing in response to your letter of 19 December 2008, where you requested comments with respect to the above audit. The ABS response is as follows:

- Part 1. The ABS has no comments on the report
- Part 2. The ABS agrees with all of the audit's recommendations

Yours sincerely

A handwritten signature in black ink, appearing to read "Brian Pink".

Brian Pink

23 January 2009



Our Ref: 09/18691

19 February 2009

Mr M Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
Barton ACT 2600

Dear Mr Cahill

Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management

Thank you for the opportunity to comment on the draft cross portfolio audit on Green Office Procurement and Sustainable Office Management. Your report is extremely timely and I believe it will provide the impetus for agencies to look at opportunities to introduce more sustainable practices and to contribute to whole of government measures to reduce the Commonwealth's environmental footprint.

While I am sure there are other examples of such groups within the Commonwealth public sector, the Department of Finance and Deregulation has established and supports a Senior Officers Property Forum. The group meets regularly and offers the opportunity for relevant agency representatives to meet, discuss issues of interest and to garner ideas and explore opportunities with their contemporaries in other agencies. There is a very real need in the environment and sustainability sector for such a group, perhaps led by the Department of the Environment, Water, Heritage and the Arts. There appears to be a lot of good work being done particularly by some of the larger agencies and it would be very useful to many of the smaller and mid sized organisations who do not have significant resources devoted to these areas to understand what opportunities are available to improve their sustainability and environmental footprint. There would also seem to be possibilities for smaller agencies to benefit by some of the procurements being undertaken by larger agencies. In many cases agencies are just not aware of what is happening on the environmental front or appreciate the opportunities significant economies of scale would offer to smaller agencies.

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In regard to the specific recommendations contained in the report, the ACC's position is as follows:

Recommendation 1

At the present time, the ACC does not have any Environmental Management Systems (EMS) in place, however it is prepared to examine the possibility of establishing an EMS in its Canberra Headquarters with the possibility of extending this more broadly, subject to available resourcing. Any examination would involve certification to ISO 14001.

Recommendation 2

The ACC supports this recommendation. We have drafted a Green IT policy supporting a reduced carbon foot print across various measures including virtualisation, green procurement and the automatic shut down of monitors and personal computers. This policy will soon go to the ACC's Senior Executive for endorsement.

The AGO also relocated its data centre into the most advanced and green friendly purpose built facility in the southern hemisphere. These activities also support recommendation made in the Gershon Review. The ACC will continue to look for ways to reduce the environmental impact and increase sustainable measures in its ICT operations.

Recommendation 3

The ACC supports this recommendation and is in the process of establishing an environmental and sustainability advisory group within individual ACC offices to develop ideas and to promote waste reduction and sustainability on both a whole of agency and local office level.

While the ACC already undertakes waste recycling in an ad-hoc and site specific way, it will examine the possibility of increasing the diversion of waste into recycling at all ACC locations including the possibility of establishing agency wide targets for diversion of waste from landfills. The ACC will also examine the degree to which it can report on these targets under the National Packaging Covenant obligations.

Additionally, the ACC has the following criteria in its Request for Tender (RFT) template:

- The environmental impact and sustainability of the proposal.

In support of that criterion the ACC makes the following comments in the RFT template:

The Australian Government applies the principles of Ecologically Sustainable Development into its business operations in order to improve environmental performance. The ACC supports this aim and endeavours to meet these objectives through:

- (a) compliance with all relevant environmental legislation, regulations, planning policies and other initiatives to which it subscribes;
- (b) integrating environmental management into business decision making at all levels;
- (c) reducing cost through better resource usage and waste management;
- (d) setting objectives and targets for continuous improvement;
- (e) monitoring, reporting and reviewing environmental management initiatives;

- (f) exploring best practice and innovative environmental management approaches to the use of education, technology and infrastructure; and
- (g) building an environmentally aware business culture.

ACC's procurement activities are a key element of implementing the Governments Environmental Policy. When considering value for money the Tender Evaluation Committee will take into consideration the environmental impact of any tenderer's response during the tender evaluation process.

Recommendation 4

The ACC supports this recommendation. It will consult with building owners to determine if water consumption figures are available at its different tenancies and if not, what is required to implement the measures including likely costs. The ACC is also prepared to examine the introduction of agency wide water reduction targets in its offices. Including implementing additional water conservation measures. The ACC has already done this in two of its larger offices and will examine its remaining tenancies to see what is achievable and realistic timetables for the changes to be implemented. The ACC will monitor and report progress against the agency-wide water reduction targets it implements.

Recommendation 5

The ACC supports this recommendation to reduce energy consumption in government operations.

Recommendation 6

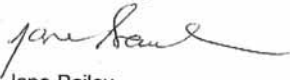
The ACC supports the development of environmental standards and practices to minimise waste going to landfills from Australian Government refurbishments and that agencies have a waste minimisation plan for refurbishments over 2,000 m².

Recommendation 7

The ACC agrees with this recommendation however it believes that a properly considered timetable needs to be included so that agencies have adequate time to make the necessary investments in infrastructure and staff to effectively measure and report against the mandatory performance indicators.

Thank you for the opportunity to comment on the draft report. I look forward to the final report being tabled in Parliament and the government's consideration in due course. If you have any questions on the ACC's response please contact our Accommodation Manager, Mr Stephen Dixon on (02) 6243 6675.

Yours sincerely



Jane Bailey
Executive Director
Organisational Services
Australian Crime Commission

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Australian Government
Australian Taxation Office

SECOND COMMISSIONER OF TAXATION

Mr Matt Cahill
ANAO Performance Audit Executive Director
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601



Dear Matt

**AUSTRALIAN NATIONAL AUDIT OFFICE CROSS PORTFOLIO PERFORMANCE AUDIT
ON GREEN OFFICE PROCUREMENT AND SUSTAINABLE OFFICE MANAGEMENT -
AUSTRALIAN TAXATION OFFICE**

Thank you for your letter of 19 December 2008 and for the opportunity to provide comments on the proposed report on the cross portfolio performance audit on green office procurement and sustainable office management.

We welcome this review and consider that the report is supportive of our overall direction in improving the environmental performance of the ATO. As noted in the findings issued in September to the ATO, the ATO has made good progress since the 2005 audit.

The ATO accepts recommendations 1, 2, 3, 4 and 5 as relevant to our operations I would like to thank the Australian National Audit Office audit team, Peter McVay, Darren Molineux and Christina Bagot, for the cooperative and professional manner they have adopted in working with us on this matter. I look forward to continuing the good working relationship developed in this performance audit.

Attached is the ATO's response to the recommendations (Annexure 1) and summary of our comments to be used in the report brochure (Annexure 2).

If you require further information on this matter, please contact Elizabeth Smith, Environmental & Insurance Manager, Property Operations on 02 4924 7807.

Yours sincerely

Bruce Quigley
Second Commissioner Law
24 February 2009

Cc ANAO auditors

Summary of Tax Office's response

The Tax Office welcomes this cross agency review and considers the report is supportive of our overall direction in improving the environmental performance of the ATO.

As noted by the ANAO the ATO has made good progress since the 2005 audit. The ATO is managing its environmental responsibilities by building an enterprise-wide framework as well as forging and maintaining key relationships across the government, and with our service providers and building owners.

A number of the recommendations within the report are specific to the Department of Environment, Water, Heritage and the Arts and therefore not commented on by the Tax Office.

A few of the recommendations are for activities which would require investment of public monies. The ATO budget and environmental management program have been finalised for this year, therefore these activities will need to be considered in future years planning and budgeting. In the mean time the ATO will explore a range of options to achieve the intent of the recommendations, e.g. improved waste and energy management. A further recommendation relating to water efficiencies presents a challenge for the agency due to the constraints placed upon us by our only being tenants in buildings, not the building owner.

In relation to recommendation 3, the Service Agreement with our major ICT supplier imposes obligations on them to consider energy efficiency and other environmental issues in all matters, including "closing the loop" on recycling. There are no such requirements in our contracts with our voice suppliers. However, when the current ICT tendering process is completed, our future supply contracts will include both environmental and energy efficiency requirements. ICT are continuing progress towards incorporating environmental criteria into all our Business Planning and procurement processes.

The ATO notes the constructive way in which this audit was conducted and reported, providing a framework for agencies, highlighting good practice and achievements.

Rec	Tax Office response
1	Agree. The Tax Office Corporate Plan includes as a focus area to develop an enterprise wide environmental framework by 2010.
2	Not Applicable
3	<p>Agree. (a) The Service Agreement with the current major supplier of ICT services requires consideration of energy efficiency and other environmental issues. ICT is continuing progress towards incorporating environmental criteria into all our Business Planning and procurement processes, with the current tendering process for ICT services including environmental and energy efficiency requirements.</p> <p>(b) ICT is continuing development of an ICT power management policy, which includes implementing automatic shutdown for desktop equipment. ICT also has guidelines for staff on how to 'shut down' computers as [opposed] to logging off. ICT is implementing Server Virtualisation, and has made improvements to the energy management settings of existing physical servers. Further, ICT is considering a proposal from a supplier to conduct an energy audit, which could contribute to the development of an energy reduction plan for the ATO.</p>
4	Agree in principle. The ATO will consider as opportunities arise in contractual arrangements where financially viable solutions are presented.
5	<p>Agree in principle.</p> <p>However, as tenants of buildings, we are hampered by building infrastructures and owners who have no legal requirement or financial benefit to implement water conservation measures. We will though implement the intent as much as possible through water saving devices installed in our fit outs and staff education.</p>
6	<p>Agree in principle.</p> <p>The ATO has an energy management plan and will consider further initiatives where financially viable and practical.</p>
7	Not Applicable



Mr Matt Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
PO Box 707
Canberra ACT 2601

Dear Mr Cahill

Australian National Audit Office (ANAO) "Green Procurement and Sustainable Office Management Follow-up Audit"

Thank you for your letter of 22 December 2008 which accompanied a copy of the ANAO's draft report on the "*Green Procurement and Sustainable Office Management Follow-up Audit*".

As one of the agencies selected for in-depth review for this audit I would like to thank your staff for their professionalism in their work in conducting this audit. Centrelink is particularly pleased that the ANAO has recognised the efforts Centrelink has made over several years to improve our environmental performance.

Please find attached Centrelink's formal response for publication in the audit report (Attachment A). Centrelink agrees in principle with all the recommendations contained in the report. However, there are a number of recommendations that will present implementation issues for Centrelink primarily related to the large number of sites (over 430) and landlords (about 400) that Centrelink works with in delivering services across the Australian continent.

Yours sincerely



Finn Pratt PSM
20 February 2009

Centrelink response to 'Green Procurement and Sustainable Office Management Follow-up Audit'

General Comments

Centrelink welcomes the ANAO's findings in this audit that validates the effectiveness of Centrelink's environmental management program in improving the agency's environmental performance. Centrelink is particularly pleased to be recognised as a lead agency in demonstrating good practice in this area and in providing practical illustrations of a commitment to environmental management that may have broader applicability across the Australian Public Service. Centrelink agrees with the recommendations of this report. Centrelink would appreciate the ongoing assistance of relevant policy departments in the articulation of policy and guidelines that take into account Centrelink's business needs to provide services across the vast geographical and climatic diversity of the Australian continent in developing and introducing cost-effective measures to implement the recommendations of this audit.

Responses to Recommendations

Recommendation 1. Agreed. This is Centrelink's current practice under the Environmental Management Systems program and summarised at the Executive level under the "Environmental Performance Scorecard".

Recommendation 2. Agreed.

Recommendation 3. Agreed.

Recommendation 4. Agreed.

Recommendation 5. Agreed.

Recommendation 6. While this recommendation is directed to DEWHA Centrelink agrees with the recommendation.

Recommendation 7. While this recommendation is directed to DEWHA Centrelink agrees with the recommendation, noting that any 'core mandatory performance indicators' will need to be achievable and cost-effective, taking into account Centrelink's business need to provide services across the vast geographical and climatic diversity of the Australian continent.



Australian Government

Comcare

Chief Executive Officer

02 6275 0001

23 January 2009

Mr Matt Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601



Dear Mr Cahill

Thank you for the opportunity to respond to the proposed audit report on Green Office Procurement and Sustainable Office Management on behalf of Comcare, one of nine agencies that participated in validation of the audit survey.

Comcare's involvement in the detailed validation exercise has proved to be a useful process for this agency. The audit has highlighted areas of performance and environmental management that this agency needs to address in order to achieve targets and a more sustainable office environment. The Comcare Executive are currently developing and implementing a plan to improve our performance. The audit report provides many practical examples of initiatives that have been implemented in other agencies that we can adapt as we implement an integrated environmental management system in Comcare and we will use the information in the report to achieve some quick wins.

The report highlights the complexity of the challenges the Australian Public Service agencies face in being at the forefront of sustainable procurement practices, particularly for small to medium sized agencies. We concur that a phased approach to achieving against target may be required where constraints such as current contractual and leasing arrangements and agency maturity impact on capacity to implement recommended actions to improve water usage and waste management.

We are strongly supportive of the key role that lead agencies such as Department of Environment Water Heritage and the Arts and agencies within the Department of Finance and Deregulation can take to ensure standards, policies and guidance material is developed on a whole of government basis to support the outcome of Green Office Procurement and Sustainable Office Management.

In relation to the specific recommendations in the report:

1. Recommendation No. 1 – agree
2. Recommendation No. 2 – agree
3. Recommendation No. 3 – agree
4. Recommendation No. 4 –agree
5. Recommendation No. 5 –agree

GPO Box 9905, Canberra ACT 2601
1300 366 979 www.comcare.gov.au

AUSTRALIA'S SAFEST WORKPLACES

If you have any further questions about Comcare's response please contact Simon Cooke, Director Property and Services on (02) 6276 0930.

Yours sincerely



Martin Dolan



www.comcare.gov.au



Australian Government
Department of Agriculture, Fisheries and Forestry



SECRETARY



Z February, 2009

MFC
1/2
Mr Matt Cahill
Group Executive Director
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601

Dear Mr Cahill

Thank you for your correspondence of 19 December 2008 concerning the Australian National Audit Office cross portfolio performance audit on Green Procurement and Sustainable Office Management.

I am writing to confirm the department's agreement with each of the audit's recommendations. The department will introduce measures to ensure all recommendations are adopted.

Yours sincerely

Conall O'Connell

18 Marcus Clarke Street Canberra City ACT GPO Box 858 Canberra ACT 2601 ph +61 2 6272 4180 fax +61 6272 4906 www.daff.gov.au ABN 24 11185 086

DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY



Office of the Secretary

Mr Matt Cahill
 Group Executive Director
 Performance Audit Services Group
 Australian National Audit Office
 GPO Box 707
 Canberra ACT 2601



23 January 2009



Dear Mr Cahill

CROSS PORTFOLIO AUDIT ON GREEN OFFICE PROCUREMENT AND SUSTAINABLE OFFICE MANAGEMENT

I refer to your letter of 19 December 2008. Please find attached formal agency comments and recommendation responses (Attachment A) from the Department of Climate Change in relation to the abovementioned audit.

The Department of Climate Change welcomes the opportunity to provide comment on this important issue. As the Department is new, we are still in the process of developing an Environment Management System (EMS). The recommendations included in this report will be taken into consideration as the Department finalises its EMS.

If you have any queries about this submission, the contact officer in my Department is Dorothy Topfer, Director, Legal and Governance. Ms Topfer can be contacted on 02 6275 9803.

With best wishes

Martin Parkinson
 Secretary



Department of Climate Change Formal agency comments

The Department of Climate Change (DCC) is currently in the process of developing its Environmental Management System (EMS). DCC is committed to taking initiative in environmental sustainability practices. As part of the EMS development process DCC will be investigating the inclusion of quantifiable objectives, sustainability goals, the availability of measures to improve waste management sustainability practices and the installation of submeters to improve water conservation.

Current tenancy agreements may restrict the range and availability of environmental sustainability practices that can be immediately enacted by DCC. However, continued negotiation and work with building owners is anticipated in the development of the Department's EMS.

DCC is interested in becoming involved in the Government Agencies Environment Network. DCC also suggests that training be made available to agencies to establish and implement the sustainable office management. A regular forum would allow for information sharing and networking of ideas to improve environmental best practice. For example, agencies that have had success with implementing environmentally sustainable changes could provide suggestions and examples on practices that they have used.

Recommendation responses

The Department of Climate Change agrees with all seven recommendations in the proposed report.

AUDIT-IN-CONFIDENCE



Australian Government
Department of Defence

Inspector General
Division

CP3-2-131
Campbell Park Offices
CANBERRA ACT 2600
Telephone: 02 6266 4249
Facsimile: 02 6266 4593

IG/OUT/2009/5

29 January 2009

Mr Matt Cahill
Australian National Audit Office
Performance Audit Services Group
GPO Box 707
CANBERRA ACT 2601



Dear Mr Cahill

**ANAO CROSS PORTFOLIO AUDIT ON GREEN OFFICE PROCUREMENT
AND SUSTAINABLE OFFICE MANAGEMENT**

On 19 December 2008 the ANAO sought comments from Defence pursuant to Section 19 of the *Auditor-General Act 1997* on the proposed cross portfolio audit report on Green Office Procurement and Sustainable Office Management.

Attached at **Annex A** is the Defence response to the draft report and recommendations, including a summary to be used in preparation of the brochure. Also attached at **Annex B** is a list of additional information and proposed amendments.

The draft report highlights that the poor environmental performance of the Defence 'white vehicle fleet' may be partly explained by the high proportion of commercial vehicles in the fleet. This statement reflects the fact that Defence has significantly more commercial vehicles than any other single agency and, in the main, the commercial vehicles are either specialist vehicles, tool of trade vehicles, training vehicles or cargo carrying vehicles.

Defence has undertaken a process of validating user requirements for the passenger fleet and a plan is being implemented to replace as many six cylinder vehicles with four cylinder vehicles as possible. This will raise the percentage of Defence passenger vehicles that achieve a GVG score of 10.5 or higher over the next two financial years.

AUDIT-IN-CONFIDENCE

Defending Australia and its National Interests

AUDIT-IN-CONFIDENCE

Defence would welcome any further discussions ANAO may wish to hold to clarify any of the comments provided in this response.

My point of contact in this matter is Heidi Madden-Brothers (Tel: (02) 62664192, or email heidi.madden-brothers@defence.gov.au). In addition, I am happy to discuss any issues or concerns you may have.

Yours sincerely



RAY BROMWICH
Acting Inspector General

Annexes:

- A. Comments on proposed recommendations and Defence summary to be included in the report brochure.
- B. Additional information and proposed amendments.

AUDIT-IN-CONFIDENCE

Defending Australia and its National Interests

DEFENCE RESPONSE

Since 2001 Defence has made significant progress in meeting its environmental policy objectives through the Defence EMS model. These policy objectives are articulated in the Defence Environmental Policy and are being met through the Defence Strategic Environmental Plan 2006 – 2009. The development of the next strategic environmental plan in 2010 will see the setting of new quantitative objectives to meet current government policy directives across the range of environmental issues facing Defence.

Defence has in place a waste minimisation strategy and has undertaken a number of initiatives to divert waste from landfill, including a digital media muster in the ACT; trials to identify reuse opportunities for shredded office paper; and have initiated organic and composting trials in a number of regions. Defence has also completed 30 physical waste audits in 2008 to assist in understanding the components of the Defence waste stream to identify opportunities for improvements. Defence agrees with Recommendation 3 of the audit noting that, while the reporting requirements may be onerous in the short term, the Department is committed to working towards minimising waste to landfill and will undertake reviews to set a baseline for waste disposal data for primary sites.

Defence has in place a water management strategy and has taken steps to better manage water consumption across the estate. Given its size and geographical spread, Defence faces significant challenges in water monitoring and reporting, as many Defence sites / bases are supplied with water by different water authorities. Defence has information on its water use across major bases, gained through the National Water Use and Consumption Profile Study (October 2006) and will be prioritising water efficiency initiatives at these primary sites in the short term. While Defence agrees with recommendation 4, it considers that the reporting requirements will be onerous in the short term and implementation of water conservation measures will be determined by funding availability. Defence will work on developing an agreed approach to water consumption reporting with DEWHA for its primary sites.

Defence has in place an Energy Strategy and supporting energy management plans. The Energy Strategy was finalised in 2007 in accordance with the EEGO Policy 2006. Each region has in place an Energy Action Plan (EAPs) which identifies short, medium and long term actions, as well as nil cost, low cost or funded initiatives to reduce energy consumption and/or to improve energy efficiency throughout the Defence estate. Defence has been undertaking energy audits and will continue to implement, cost effective energy reduction or efficiency initiatives in both leased and owned facilities.

Defence operates a significant white fleet that has a high proportion of commercial vehicles to support administration, training and operational activities. Defence has significantly more commercial vehicles than any other single agency and, in the main; the commercial vehicles are either specialist vehicles, tool of trade vehicles, training vehicles or cargo carrying vehicles. The passenger fleet, which represents approximately one third of the overall fleet, is predominantly six cylinder vehicles that do not meet the required 10.5 GVG score. The vehicles were purchased to meet the

requirements of the users, to comply with Australian Government industry policy objectives of purchasing Australian made vehicles and, at the time, represented best value for money.

A process of validating user requirements has been undertaken and a plan is being implemented to replace as many six cylinder vehicles with four cylinder vehicles as possible. This will raise the percentage of Defence passenger vehicles that achieve a GVG score of 10.5 or higher over the next two financial years. This timeframe coincides with the Life of Type replacement plan for the passenger vehicle fleet.



Australian Government
Department of Education, Employment and Workplace Relations



Mr Matt Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601

Dear Mr Cahill

Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management

Thank you for the opportunity to comment on the Australian National Audit Office's (ANAO) Performance Audit on the Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management

As indicated in our overall comment to the executive summary, the department is supportive of the report's recommendations; it notes the qualification that many of the measures outlined in the report have practical constraints with respect to their implementation.

Please find attached the department's comments on the proposed audit report, and response to each of the Report recommendations.

If you have any queries regarding the department's response, please contact myself on (02) 6121 7144.

Yours sincerely

Brien Armstrong
Chief Internal Auditor
4 February 2009



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DEEWR RESPONSE - ANAO AUDIT REPORT
Green Office Procurement and Sustainable Office Management

Comments

DEEWR is already undertaking a range of sustainability measures with respect to waste management, water consumption and energy utilisation across a number of its tenancies. While DEEWR is supportive of the report's recommendations, it notes the qualification that many of the measures outlined in the report have practical constraints with respect to their implementation.

In DEEWR's case, these constraints includes the large and diverse nature of our property portfolio; the existing standard of available building stock; and the fact that many of our existing leases retain a period of nominal occupancy which would make the analytical work required to construct a robust and realistic energy efficiency target in those leases a marginal proposition. Accordingly, DEEWR has been focussing its energy efficiency efforts primarily (but not exclusively) on the area in which it will have greatest impact - namely with respect to the development of our new leasing options. In accordance with Australian Government policy we aim to ensure that all new leases over 2,000 sqm have a minimum 4.5 star National Australian Built Environment Rating System (NABERS) rating and Green Lease Schedule, and we are working to ensure fit out design and construction meets 5 star Greenstar standards. The department's most significant project - the new building being constructed at 50 Marcus Clarke street, will be a 40,000 sqm building which is being designed to achieve 5 star NABERS and 5 star Greenstar ratings for both base building and fit out. The building is expected to be ready for occupancy in the second half of 2010.

DEEWR will continue to analyse the environmental/cost-benefit of improvement initiatives in older leased premises. However we believe most benefit is to be realised on projects where new buildings or complete refurbishment of existing buildings allows lessors and tenants an opportunity to engineer elements that provide for energy efficient technology and systems that will assist improvements into the future.

Recommendation 1

DEEWR agrees to this recommendation, noting the general qualification provided in the agency comments.

Recommendation 2

DEEWR agrees to this recommendation, noting the general qualification provided in the agency comments. DEEWR would note that it is investigating a range of energy saving measures with respect to all office equipment being purchased for its new premises at 50 Marcus Clarke Street.

Recommendation 3

DEEWR agrees with this recommendation.

Recommendation 4

DEEWR agrees to this recommendation, noting the general qualification provided in the agency comments.

Recommendation 5

DEEWR agrees to this recommendation, noting the general qualification provided in the agency comments.

Recommendation 6

DEEWR agrees to this recommendation, noting the general qualification provided in the agency comments.

Recommendation 7

DEEWR agrees to this recommendation, noting the general qualification provided in the agency comments.

COPY



Australian Government
Department of Families, Housing,
Community Services and Indigenous Affairs

DEPUTY SECRETARY
CHIEF OPERATING OFFICER/CFO



Mr Matt Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
GO Box 707
CANBERRA ACT 2601

Dear Mr Cahill

Thank you for your letter of 19 December 2008 to the Secretary, Dr Jeff Harmer, offering the opportunity for the Department of Families, Housing, Community Services and Indigenous Affairs (FaHCSIA) to consider the proposed ANAO Report on the Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management.

FaHCSIA agrees with and supports all seven recommendations in the Report. The department is already meeting the requirements of Recommendations 1, 2, 3 and 5. I would like to express our appreciation to you and your team for producing what we consider to be a very useful and informative overview of the Commonwealth's performance on green office procurement and sustainable office management.

Yours sincerely

A handwritten signature in black ink, appearing to read "B Hunter".

Bruce Hunter
20 February 2009

Audit-in-Confidence



Australian Government
Department of Finance and Deregulation

Dr Ian Watt AO
Secretary

Our Ref: SEC0000665

Mr Ian McPhee PSM
Auditor-General
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601



Dear Auditor-General *Jan* *2/4/2*

Thank you for the letter of 19 December 2008, from Mr Matt Cahill, inviting the Department of Finance and Deregulation (Finance) to provide comments on the proposed audit report on *Green Office Procurement and Sustainable Office Management*.

In accordance with s.19 of the *Auditor-General Act 1997*, please find attached Finance's formal response to the report and recommendations and editorial comments for your consideration.

On review of the audit documents, my staff identified that some elements of our survey answers, provided to you in May 2008, require correction. A corrected response will be forwarded to you next week as arranged by our Chief Financial Officer, Mr Michael Burton, in discussion with Ms Barbara Cass, Executive Director, Australian National Audit Office.

If you have any questions regarding the response, please contact Mr Bradley Burch, Property and Construction Division, on (02) 6215 3955 or by email to bradley.burch@finance.gov.au.

Yours sincerely

I J Watt
2 February 2009

REC'D AG-2 4/2

Audit-In-Confidence

John Gorton Building, King Edward Terrace, Parkes ACT 2600 • Telephone 02 6215 3445 • Facsimile 02 6273 1925
Internet www.finance.gov.au

Department of Finance and Deregulation: s.19 Response to the Proposed Audit Report on *Green Office Procurement and Sustainable Office Management*

General comments

The Department of Finance and Deregulation (Finance) agrees or agrees in-principle with all recommendations in this proposed report. Where the Department agrees in-principle, the qualifications to the agreement are outlined below.

Finance notes that there is considerable scope for agencies to improve their environmental performance. The development of clearer guidance material on environmental policies by the Department of the Environment, Water, Heritage and the Arts (DEWHA), in consultation with other Commonwealth agencies as necessary, will assist departments in this regard.

Finance notes that the implementation of some of the recommendations, mainly recommendations 2, 3 and 6, may involve significant cost to agencies. This is especially the case where new measurement devices are required or existing contracts need variation.

Comments on the proposed recommendations

Recommendation 1

Agreed

Recommendation 2

Agreed, noting that there is no current policy basis for requiring environmental criteria in ICT business planning and procurement and ICT power management; however, the implementation of Recommendation 7 will ensure that agencies will have clear guidance and performance indicators.

Finance also notes that this recommendation will be addressed by the Australian Government Information Management Office's (AGIMO) response to the Review of the Australian Government's Use of Information and Communication Technology (the Gershon Review).

Recommendation 3

Agreed in-principle, noting that there is no current policy basis for agencies waste management practices; however, the implementation of Recommendation 7 will ensure that agencies will have clear guidance and performance indicators.

Finance also notes that the implementation of this recommendation may require contract variations or new contractual arrangements.

Recommendation 4

Agreed in-principle, noting that there is no current policy basis for water conservation targets; however, the implementation of Recommendation 7 will ensure that agencies will have clear guidance and performance indicators.

Finance also notes that implementation may be costly or results inaccurate where there is shared tenancy arrangements and water is not separately metered.

Recommendation 5

Agreed

Recommendation 6

Agreed in-principle, noting that there is no current policy basis for waste management during refurbishment projects; however, the implementation of Recommendation 7 will ensure that agencies will have clear guidance and performance indicators.

Recommendation 7

Agreed, noting that carrying out this recommendation will enable more effective implementation of recommendations 2, 3, 4 and 6.

Finance also suggests that DEWHA seek information and communication technology advice from AGIMO when developing environmental standards, policies and practices for information and communication technology. The Procurement Division should be consulted in relation to procurement policy and Property and Construction Division in relation to Government construction and property ownership.

Department of Finance and Deregulation: Editorial Comments on the Proposed Audit Report on Green Office Procurement and Sustainable Office Management

Paragraph 1.7 – The draft report should state that there are 20 rather than 19 Commonwealth Authorities and Companies Act 1997 (CAC Act) bodies. It appears that the Aged Care Standards and Accreditation Agency Ltd has been excluded from the count. This body is listed under Part 2, Schedule 1 of the Commonwealth Authorities and Companies Regulations 1997.

Paragraph 3.22 – The last sentence, stating that the FMB has responsibility for monitoring progress against the GVG target, is factually incorrect. The FMB has no responsibility for monitoring progress against the target, as this is not a Finance policy.

Paragraph 3.23 – In establishing the GVG target, it was agreed that the target could be achieved (i) without additional cost to the Commonwealth, (ii) without affecting the executive vehicle scheme, and (iii) without affecting fit for purpose vehicles. The first requirement is not reflected in the Report.

Paragraph 3.25 (incorporating Figure 3.5) – The note to this table should be amended to reflect that different versions of the same model can have different GVG scores due to having either manual or automatic transmissions or a choice of different engine configurations (i.e. – six or eight cylinder).



Australian Government
Department of Health and Ageing

SECRETARY

AUDIT – IN - CONFIDENCE

Ref: 2008/017024

Mr Matt Cahill
Group Executive Director
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601

Dear Mr Cahill

**ANAO CROSS PORTFOLIO PERFORMANCE AUDIT: GREEN OFFICE
PROCUREMENT AND SUSTAINABLE OFFICE MANAGEMENT**


Thank you for your letter of 19 December 2008, providing the Department with the opportunity to comment on the draft Section 19 report on the above audit.

The Department's comments on the proposed audit report are provided in the following attachments:

- **Attachment A** – the Department's formal comments on the proposed report; and
- **Attachment B** – the Department's response to each of the audit's recommendations.

If you have any questions about the Department's comments on the issues paper, please contact Mr Colin Cronin on 62897877 in the first instance.

Yours sincerely



Jane Halton PSM
Secretary

27 January 2009

MDP 84 GPO Box 9848 Canberra ACT 2601
Telephone: (02) 6289 8400 Facsimile: (02) 6285 1994

ATTACHMENT A

DEPARTMENT OF HEALTH AND AGEING –**FORMAL AGENCY COMMENTS ON THE PROPOSED REPORT ON THE CROSS PORTFOLIO AUDIT ON GREEN OFFICE PROCUREMENT AND SUSTAINABLE OFFICE MANAGEMENT**

The Department appreciates the importance of these issues and will continue with its property and office management practices to reduce the overall impact on the environment in regard especially to waste management, and water and energy consumption.

The Department is the process of re-developing its environmental management system (EMS) and it is noted and agreed that energy use minimisation is an essential element to factor into an effective system. The updated EMS results in the main from the planned move to a new building in Woden ACT in early 2010. This will provide an opportunity to set appropriate standards for office management including current practices for sustainable general procurement, waste management, water usage and energy use that can then flow out to other departmental offices.

The Department has a continued interest in improving its performance in the field of green office procurement and sustainable office management.

ATTACHMENT B

DEPARTMENT OF HEALTH AND AGEING - RESPONSE TO EACH OF THE AUDIT'S RECOMMENDATIONS ON THE CROSS PORTFOLIO AUDIT ON GREEN OFFICE PROCUREMENT AND SUSTAINABLE OFFICE MANAGEMENT**Recommendation No.1**

Comment on the recommendation- Agreed.

The Department is currently in the process of re-developing and certifying an Environmental Management System (EMS) for Scarborough House (16,499m²) and the new 2010 Central Office (CO) building (46,000m² in Woden ACT). The system will incorporate quantifiable objectives that will lead to better practices as well as both short and longer term sustainability goals. Once the EMS is in place it is anticipated that the process will then be expanded to incorporate departmental state and territory offices and target reductions in energy use, waste and fuel consumption.

Recommendation No. 2

Comment on the recommendation- Agreed

Recommendation No.3

Comment on the recommendation- (a)+ (b) + (c) + (d) Agreed

Recommendation No.4

Comment on the recommendation- (a) + (b) + (c) Agreed

Recommendation No.5

Comment on the recommendation- (a) + (b) + (c) Agreed

The Department currently has an energy management plan, conducts energy audits and is cognisant of the need to and actively pursues cost effective energy conservation initiatives across its property portfolio.

Recommendation No.6

Comment on the recommendation- No comment

Recommendation No.7

Comment on the recommendation- No comment



Australian Government

Department of the Environment, Water, Heritage and the Arts

McC 6/2
Matt Cahill
Group Executive Director Performance Audit Services Group
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601



Dear Mr Cahill

Thank you for your letter of 19 December 2008 requesting comments on the Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management.

The Department of the Environment, Water, Heritage and the Arts (DEWHA) is currently reviewing its Energy Efficiency in Government Operations (EEGO) policy and will take into consideration the findings and recommendations made in this report.

Further, DEWHA is of the view that a high level policy framework for water and waste management, similar to the EEGO policy, could help coordinate and provide guidance to agencies in the development of appropriate strategies and implementation of cost effective measures to improve their sustainability performance.

In light of ANAO's revised request for comments that can be attached in full to the draft ANAO report, rather than in summary form, DEWHA's comments on each of the recommendations are attached.

Yours sincerely

Mr Gerard Early
A/g Secretary
Department of the Environment, Water, Heritage and the Arts
5 February 2009



GPO Box 787 Canberra ACT 2601 Telephone 02 6274 1111 Facsimile 02 6274 1666
www.environment.gov.au



Department of the Environment, Water, Heritage and the Arts (DEWHA)

**DEWHA Comments on
Draft ANAO Cross Portfolio Audit on Green Office Procurement and Sustainable
Office Management report recommendations**

5 February 2009

Recommendation 1

Agreed.

The quantifiable objectives referred to should be set for every agency Environmental Management System (EMS) and this will assist in the procurement of EMS systems as well as reporting from such systems on a whole-of-government basis. While it is important to strengthen the quality and consistency of agencies' EMSs it would also be important and a major advance to require all Government agencies to have an EMS coverage for each of their office spaces or work sites above a minimum area or employee number (for example, for office spaces greater than 5000m² or work sites employing more than 250 staff). Another way to strengthen the objectives and targets that agencies develop and implement is to achieve and maintain ISO 14001:2004 certification.

Recommendation 2

Agreed.

The Department also suggests that agencies should capture the broader spectrum of long term solutions that could result from ICT improvements, not just energy efficiency, for example, development and maintenance of paperless document storage systems. It is recommended that there be a reference to minimisation of e-waste streams accruing from ICT usage in government, for example: environmental criteria in ICT business planning and procurement that explicitly requires energy efficiency and environmental performance standards for equipment, including minimisation of the e-waste stream throughout the equipment life-cycle from production to disposal. It is suggested that the word 'automatic' be removed from the recommendation, as the desired outcome is the shutdown of unused equipment. The outcome could either be achieved by an automated system or by changes in work practices and staff education where such automated systems are not possible for operational or financial reasons.

Recommendation 3

Agreed.

The Department notes that accurate waste data can be problematic for agencies in multi-tenanted buildings.

Recommendation 4

Agreed.

The Department notes that a water policy framework similar to the Energy Efficiency in Government Operations (EEGO) policy could be helpful in coordinating and assisting agencies in the delivery of the actions proposed under this recommendation. However, accurate water data is very difficult to obtain for agencies in multi-tenanted buildings, requiring separate water metering to be installed at the building owner's expense and hence beyond the control of agencies leasing their office space.

Recommendation 5

Agreed.

This recommendation aligns well with the Government's election commitment to improve the sustainability performances in its operations. DEWHA is currently reviewing the EEGO policy and the ANAO's findings and recommendation in Chapter 5 of the audit report will be fed into the review process and the development of DEWHA's recommendations for Government consideration. Environmental Management Systems (EMSs) that are certified to ISO 14001:2004 will include one or more environmental management plans dealing with energy consumption. Any requirements introduced to develop energy management plans or other measures should be consistent with or at least not more onerous than ISO 14001:2004 requirements. Where an agency has several EMSs in place to cater for different sites and their different operational environments there should not be a requirement to have a single energy management plan across the agency's property portfolio. In addition short-term leases and leases of small areas should be exempt from an energy management plan to ensure resources are focussed on strategies (identified in EMSs) that will deliver the best environmental outcomes.

Recommendation 6

Agree with qualification.

The Department notes that any activities and functions undertaken by the Department are subject to Ministerial priorities and resource availability.

Recommendation 7

Agree with qualification.

DEWHA will take this into consideration in its review of the EEGO Policy to ensure consistency between the energy reporting requirements under the policy and the proposed revision of the guidance material on energy performance indicators under the EPBC Act. In addition, S.516A reporting may be an issue considered as part of the current independent review of the EPBC Act.



Australian Government

Department of the Prime Minister and Cabinet

2008/1210

Mr Matt Cahill
Group Executive Director
Performance Audit Services group
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601



ONE NATIONAL CIRCUIT
BARTON



Dear Mr Cahill

I refer to your letter dated 19 December 2008 seeking the department's comments on the proposed audit report *Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management*.

Please find attached our response to each of the audit's recommendations.

Yours sincerely

Sue Ball
A/g First Assistant Secretary
Corporate Services Division

29 January 2009

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Department of the Prime Minister and Cabinet Response

Response to individual recommendations

Recommendation	Response to ANAO
No. 1	Agree.
No. 2	Agree.
No. 3	Agree.
No. 4	Agree.
No. 5	Agree.
No. 6	Agree.
No. 7	The department supports the need to revise the guidance material provided to agencies to enhance the consistency and comprehensiveness of the annual reporting required under Section 516A of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .

General comments

It should be noted that in Section 6 - Sustainability in buildings and tenancies, discussion of outcomes under the NABERS energy rating does not specify whether the rating is for the base building, tenancy or whole of building, which can be a different rating.

On page 137 of the audit report, the department is referred to as "Department of Prime Minister and Cabinet". It should be "Department of the Prime Minister and Cabinet".



Australian Government
Medicare Australia

If not delivered return to PO Box 1001 Tuggeranong DC ACT 2901



Mr Matt Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
GPO Box 707
CANBERRA ACT 2601

Dear Mr Cahill

Cross Portfolio Audit on Green Office Procurement and Sustainable Office Management

I refer to your letter of 19 December 2008 to the former Chief Executive Officer, Ms Catherine Argall PSM.

Pursuant to section 19(4) of the *Auditor-General Act 1997* Medicare Australia has prepared comments for ANAO consideration when drafting the final audit report on Green Office Procurement and Sustainable Office Management.

The formal agency comments on the proposed report are as follows:

Over the past three years, Medicare Australia has made a substantial investment in its environmental management plan and has achieved strong results in reducing the environmental impact of its business operations.

While Medicare Australia supports the thrust of recommendations contained within the Audit Report, it has concerns that the cost of further incremental improvements in environmental management and reporting may outweigh the associated benefits. Medicare Australia suggests that requirements developed as a result of this Audit Report are based on a full cost/benefit analysis.

In addition to these comments, please find attached response to each of the audit's recommendations.

If there are any questions concerning this response please contact Mr Mick Dawes on (02) 61246445 or email m.dawes@medicareaustralia.gov.au

Yours sincerely

Philippa Godwin
A/g Chief Executive Officer

Attachment: Medicare response to draft audit recommendations (p 24)

Rec No.1	Para 2.26	Agree
Rec No.2	Para 3.48	(a) Agree (b) Agree
Rec No.3	Para 4.17	(a) Agree – where local council and property management permits (b) Agree - where contractors in regional localities can supply this information (c) Agree - noting that timeframes will be subject to site complexity and location (d) Agree
Rec No.4	Para 4.34	(a) Agree (b) Agree (c) Agree
Rec No.5	Para 5.41	(a) Agree (b) Agree (c) Agree
Rec No.6	Para 6.32	(a) Agree (b) Agree
Rec No.7	Para 7.26	Agree – However in the development of reporting requirements, Medicare Australia suggests that consideration be given to the ability of agencies to collect required information within required annual reporting timeframes. Medicare Australia's experience is that an extended timeframe is necessary to obtain data - particularly in regional sites where electricity consumption is not known until well after the end of financial year - such as a lag in energy provider meter readings and accounting frequency (quarterly accounts).

7 January 2009



nga



Mr Matt Cahill
Group Executive Director
Performance Audit Services Group
Australian National Audit Office
GPO Box 707
CAN BERRA ACT 2601

Dear Mr Cahill,

RE: Cross Portfolio Audit on Green Procurement and Sustainable Office Management

Thank you for your letter of 19 December 2008 and the copy of the proposed audit report on Green Office Procurement and Sustainable Office Management. The proposed report has been reviewed by the Gallery and the recommendations, in principle, are agreed. The Gallery will use the recommendations to guide our priorities in further developing our strategies to achieve better practices in this area.

Yours sincerely

Alan Froud
Acting Director

national gallery of australia

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Appendix 2: Summary table of 2005–06 recommendations and progress in 2008–09

2005-06 Recommendation	Summarised recommendation from 2005–06	Overall progress by agencies 2008–09	2008–09 report reference
No. 1	Agencies amend Chief Executive Instructions (CEIs) or internal policies as appropriate to require purchasing officials to have regard to whole-of-life cycle assessment and the Environmental Purchasing Guide in their purchasing decisions.	Substantive progress has been made. Three quarters of agencies surveyed explicitly include whole-of-life cycle costing in their CEIs or internal policies.	Para 2.3
No. 2	Department of the Environment and Heritage, (DEH) in consultation with the Department of Finance and Administration enhance the accessibility of information on green procurement and ensure that all information is regularly updated and supported with better practice examples.	Some progress has been made. Environment has improved its website. The majority of agencies found the website useful.	Para 2.8
No. 3	Agencies implement an environmental management system (EMS) based on ISO 14001 or an equivalent standard for their organisation; and accrediting at least one of their larger sites to ISO 14001 or an equivalent standard.	Some progress has been made. There has been an increase in the number of agencies using an EMS and nearly half of all sites have an EMS.	Para 2.16
No. 4	Agencies implement challenging but realistic targets in water, energy, waste, and vehicles as part of the design and implementation of their environmental management systems.	Little progress has been made. Just under half of agencies do not have firm targets within their EMS.	Para 2.21
No. 5	DEH in consultation with relevant agencies, investigate the scope for benchmarking the environmental attributes and indicative value for money of common office goods and services across agencies; and all agencies consider the	Some progress has been made. The majority of agencies participate in whole-of-government energy and fleet vehicle contracts and clusters at the portfolio level. However, there is little	Para 3.8

2005-06 Recommendation	Summarised recommendation from 2005-06	Overall progress by agencies 2008-09	2008-09 report reference
No. 6	<p>opportunities for group purchasing clusters for the procurement of common office goods where appropriate.</p> <p>DEH and the Department of Finance and Administration include, as part of their agency guidance, good practice principles in relation to managing surplus or obsolete computer and ICT equipment and all agencies ensure that all new appliance purchases include a provision for a 4-star or better energy rating under the Appliance Energy Efficiency Rating Label Scheme.</p>	<p>additional guidance regarding benchmarking environmental attributes of office goods.</p> <p>Some progress has been made. In December 2007 the Managing the Environmental Impact of ICT – Better Practice Checklist was published. Two thirds of agencies consider energy consumption in their ICT purchases.</p>	Para 3.40
No. 7	<p>DEH in consultation with the Fleet Monitoring Body in the Department of Finance and Administration and other agencies, consider measures to encourage greater energy efficiency in future vehicle leasing arrangements or purchases within the Australian Government fleet; and set appropriate individual fleet energy efficiency targets for agencies (including for the Department of Defence fleets).</p>	<p>Little progress has been made. No agency or Defence fleet efficiency targets were set. The December 2005 Green Vehicle Guide target was met 18 months late and has not been updated. There has been no further guidance to agencies regarding fleet efficiency since 2005.</p>	Para 3.31
No. 8	<p>Agencies consider, where practicable/consistent with current Government policy, options to reduce greenhouse gas emissions.</p>	<p>Some progress has been made. The government met the 2005 target to reduce the greenhouse gas emissions of their fleets but some agencies are not performing well.</p>	Para 3.19
No. 9	<p>DEH provide better practice guidance to agencies on the adoption of water conservation practices; and all agencies consider appropriate targets and cost effective measures to reduce water consumption.</p>	<p>Some progress has been made. The Water Efficiency Guide was published in 2006. However most agencies do not have water efficiency targets, despite most agencies adopting at least some water efficiency initiatives.</p>	Para 4.24

2005-06 Recommendation	Summarised recommendation from 2005-06	Overall progress by agencies 2008-09	2008-09 report reference
No. 10	All agencies ensure that whole of life cycle assessments for building construction and office refurbishments explicitly include environmental impacts with the aim of achieving reductions in waste to landfill and improving value for money over the longer term; and measure and report on the environmental management of major refurbishments as part of reporting on sustainability in their annual report.	Little progress has been made. Few agencies have clauses to minimise waste. Most agencies can not measure or report waste from construction or refurbishment projects. The majority of agencies do not report environmental management details in their annual reports.	Para 5.28
No. 11	All agencies introduce co-mingled and organic waste recycling schemes for office waste management; and clauses in purchasing contracts to minimise packaging waste.	Some progress has been made. Most agencies implement co-mingled recycling. Organic recycling rates are low but have increased. Less than a quarter of agencies included clauses to minimise packaging waste.	Para 4.3
No. 12	DEH focus reporting on changes in energy intensity in future Energy Use in Australian Government Operations reports and include appropriate caveats on any reported changes in total energy consumption.	DEH addressed this recommendation in Energy Use in Australian Government Operations reports 2006-07.	Para 5.9
No. 13	All agencies introduce energy management plans (EMP), conduct energy audits, ensure that separate digital metering for tenant light and power and for central services is standard practice at all major sites with ongoing leases; and implement all energy conservation initiatives that are cost effective within remaining lease periods.	Some progress has been made towards implementing energy conservation initiatives. Just over half of agencies have introduced EMPs and have conducted energy audits.	Para 5.28
No. 14	All agencies consider an appropriate energy rating scheme for their existing property portfolio such as ABGR; and	Some progress has been made towards rating individual sites but little to no progress has	Para 6.16

2005-06 Recommendation	Summarised recommendation from 2005-06	Overall progress by agencies 2008-09	2008-09 report reference
	develop an efficiency target for portfolio tenancies and buildings using this energy rating scheme.	been made towards establishing targets for portfolio tenancies.	
No. 15	All agencies join the Greenhouse Challenge Plus program.	Little progress has been made. The majority of agencies have not joined the program.	Para 5.28
No. 16	Department of the Environment and Heritage pursue strategies to achieve best practice green office procurement by Australian Government agencies in energy efficiency, water conservation, waste management and in procurement practices, update current policies and targets, develop a comprehensive website to advise Australian Government agencies on the requirements and mechanisms to achieve the targets; regularly measure performance against the targets and require reporting on progress towards sustainability targets.	Progress has been made towards upgrading the DEH website. However, significant work is required towards upgrading targets in the areas of water, waste and procurement.	Para 2.3

Appendix 3: Surveyed Agencies

Agencies regulated under the Financial Management and Accountability Act 1997

Attorney-General's Department[#]

AusAID[#]

Australian Bureau of Statistics[#]

Australian Communications and Media Authority

Australian Competition and Consumer Commission

Australian Crime Commission[#]

Australian Customs and Border Protection Service

Australian Electoral Commission

Australian Pesticides and Veterinary Medicines Authority

Australian Public Service Commission

Australian Securities and Investments Commission

Australian Security Intelligence Organisation

Australian Taxation Office[#]

Australian Trade Commission

Bureau of Meteorology[#]

Centrelink[#]

Child Support Agency

Comsuper

Defence Materiel Organisation

Department of Agriculture, Fisheries and Forestry[#]

Department of Broadband, Communications and the Digital Economy

Department of Climate Change[#]

Department of Defence[#]

Department of Education, Employment and Workplace Relations[#]

Department of Families, Housing, Community Services and Indigenous Affairs[#]

Department of Finance and Deregulation[#]

Department of Foreign Affairs and Trade[#]

Department of Health and Ageing[#]

Department of Human Services

Department of Immigration and Citizenship

Department of Infrastructure, Transport, Regional Development and Local Government
Department of Innovation, Industry, Science and Research
Department of Parliamentary Services
Department of the Prime Minister and Cabinet[#]
Department of Resources, Energy and Tourism
Department of the Environment, Water, Heritage and the Arts[#]
Department of the Treasury
Department of Veterans' Affairs[#]
Family Court of Australia
Geoscience Australia
Great Barrier Reef Marine Park Authority
Insolvency and Trustee Service Australia
IP Australia
Medicare[#]
National Archives of Australia
National Health and Medical Research Council
Office of National Assessments
Productivity Commission

Agencies regulated under the Commonwealth Authorities and Companies Act 1997

Airservices Australia[#]

Australian Broadcasting Corporation

Australian Fisheries Management Authority

Australian Hearing Services

Australian Institute of Health and Welfare

Australian Institute of Marine Science

Australian Maritime Safety Authority

Australian Nuclear Science and Technology Organisation

Australian Sports Commission

Australian War Memorial

Civil Aviation Safety Authority CASA

Comcare[#]

Commonwealth Scientific and Industrial Research Organisation

National Gallery of Australia[#]

National Library of Australia

National Museum of Australia

Reserve Bank of Australia

Special Broadcasting Service Corporation

[#] Agencies that were provided with the draft report

Series Titles

ANAO Audit Report No.1 2008–09
Employment and Management of Locally Engaged Staff
Department of Foreign Affairs and Trade

ANAO Audit Report No.2 2008–09
Tourism Australia

ANAO Audit Report No.3 2008–09
Establishment and Management of the Communications Fund
Department of Broadband, Communications and the Digital Economy
Department of Finance and Deregulation

ANAO Audit Report No.4 2008–09
*The Business Partnership Agreement between the Department of Education,
Employment and Workplace Relations (DEEWR) and Centrelink*
Department of Education, Employment and Workplace Relations
Centrelink

ANAO Audit Report No.5 2008–09
*The Senate Order for Departmental and Agency Contracts (Calendar Year 2007
Compliance)*

ANAO Audit Report No.6 2008–09
Illegal, Unreported and Unregulated Fishing in the Southern Ocean
Australian Customs Service

ANAO Audit Report No.7 2008–09
Centrelink's Tip-off System
Centrelink

ANAO Audit Report No.8 2008–09
National Marine Unit
Australian Customs Service

ANAO Report No.9 2008–09
Defence Materiel Organisation—Major Projects Report 2007–08

ANAO Audit Report No.10 2008–09
Administration of the Textile, Clothing and Footwear Post–2005 (SIP) Scheme
Department of Innovation, Industry, Science and Research

ANAO Audit Report No.11 2008–09
Disability Employment Services
Department of Families, Housing, Community Services and Indigenous Affairs
Department of Education, Employment and Workplace Relations

ANAO Audit Report No.25 2008–09
Green Office Procurement and Sustainable Office Management

ANAO Audit Report No.12 2008–09
Active After-school Communities Program
Australian Sports Commission

ANAO Audit Report No.13 2008–09
Government Agencies' Management of their Websites
Australian Bureau of Statistics
Department of Agriculture, Fisheries and Forestry
Department of Foreign Affairs and Trade

ANAO Audit Report No.14 2008–09
Audits of Financial Statement of Australian Government Agencies for the Period Ending June 2008

ANAO Audit Report No.15 2008–09
The Australian Institute of Marine Science's Management of its Co-investment Research Program
Australian Institute of Marine Science

ANAO Audit Report No.16 2008–09
The Australian Taxations Office's Administration of Business Continuity Management
Australian Taxation Office

ANAO Audit Report No.17 2008–09
The Administration of Job Network Outcome Payments
Department of Education, Employment and Workplace Relations

ANAO Audit Report No.18 2008–09
The Administration of Grants under the Australian Political Parties for Democracy Program
Department of Finance and Deregulation

ANAO Audit Report No.19 2008–09
CMAX Communications Contract for the 2020 summit
Department of the Prime Minister and Cabinet

ANAO Audit Report No.20 2008–09
Approval of Funding for Public Works

ANAO Audit Report No.21 2008–09
The Approval of Small and Medium Sized Business System Projects
Department of Education, Employment and Workplace Relations
Department of Health and Ageing
Department of Veterans' Affairs

ANAO Audit Report No.22 2008–09
Centrelink's Complaints Handling System
Centrelink

ANAO Audit Report No.23 2008–09
Management of the Collins-class Operations Sustainment
Department of Defence

ANAO Audit Report No.24 2008–09
The Administration of Contracting Arrangements in Relation to Government
Advertising to November 2007

ANAO Audit Report No.25 2008–09
Green Office Procurement and Sustainable Office Management

Current Better Practice Guides

The following Better Practice Guides are available on the Australian National Audit Office Website.

Developing and Managing Internal Budgets	June 2008
Agency Management of Parliamentary Workflow	May 2008
Public Sector Internal Audit	
An Investment in Assurance and Business Improvement	Sep 2007
Fairness and Transparency in Purchasing Decisions	
Probity in Australian Government Procurement	Aug 2007
Administering Regulation	Mar 2007
Developing and Managing Contracts	
Getting the Right Outcome, Paying the Right Price	Feb 2007
Implementation of Programme and Policy Initiatives:	
Making implementation matter	Oct 2006
Legal Services Arrangements in Australian Government Agencies	Aug 2006
Preparation of Financial Statements by Public Sector Entities	Apr 2006
Administration of Fringe Benefits Tax	Feb 2006
User-Friendly Forms	
Key Principles and Practices to Effectively Design and Communicate Australian Government Forms	Jan 2006
Public Sector Audit Committees	Feb 2005
Fraud Control in Australian Government Agencies	Aug 2004
Security and Control Update for SAP R/3	June 2004
Better Practice in Annual Performance Reporting	Apr 2004
Management of Scientific Research and Development Projects in Commonwealth Agencies	Dec 2003
Public Sector Governance	July 2003
Goods and Services Tax (GST) Administration	May 2003
Building Capability—A framework for managing learning and development in the APS	Apr 2003
Administration of Grants	May 2002

Performance Information in Portfolio Budget Statements	May 2002
Some Better Practice Principles for Developing Policy Advice	Nov 2001
Rehabilitation: Managing Return to Work	June 2001
Business Continuity Management	Jan 2000
Building a Better Financial Management Framework	Nov 1999
Building Better Financial Management Support	Nov 1999
Commonwealth Agency Energy Management	June 1999
Security and Control for SAP R/3	Oct 1998
Controlling Performance and Outcomes	Dec 1997
Protective Security Principles (in Audit Report No.21 1997–98)	Dec 1997

