

The Auditor-General

Audit Report No.47 1998-99

Performance Audit

Energy Efficiency in Commonwealth Operations

Department of Industry, Science and Resources
Australian Greenhouse Office

Australian National Audit Office

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ISSN 1036-7632
ISBN 0 644 38962 1

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Canberra ACT
15 June 1999

Dear Madam President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit of the Department of Industry, Science and Resources and the Australian Greenhouse Office in accordance with the authority contained in the *Auditor-General Act 1997*. I present this report of this audit, and the accompanying brochure, to the Parliament. The report is titled *Energy Efficiency in Commonwealth Operations*.

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



P. J. Barrett
Auditor-General

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

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Acronyms and abbreviations

AGO	Australian Greenhouse Office
ANAO	Australian National Audit Office
ANZMEC	Australian and New Zealand Minerals and Energy Council
ATO	Australian Taxation Office
Attorney-General's	Commonwealth Attorney General's Department
BCA	Building Code of Australia
BMS	Building Management System
BOMA	Building Owners and Managers Association of Australia Limited (now Property Council of Australia Limited)
CAC	Commonwealth Authorities and Companies Act 1997
CEO	Chief Executive Officer or secretaries of departments of state and heads of agencies
CPR	Commonwealth Property Register
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTL	Commonwealth Tenants Lease
DHA	Defence Housing Authority
DHAC	Commonwealth Department of Health and Aged Care
DISR	Department of Industry, Science and Resources
DOD	Department of Defence
DOFA	Department of Finance and Administration
DPIE	Department of Primary Industries and Energy
EA	energy audit
EESU	Energy and Environmental Services Unit (now part of the AGO)
EMP	Energy Management Plan
EMTF	Energy Management Task Force
Environment Australia	Commonwealth Department of Environment and Heritage

EPA	United States Environmental Protection Authority
EPC	Energy Performance Contracting
FMA	Financial Management and Accountability Act 1997
GBE	Government Business Enterprise
HVAC	Heating, Ventilation and Air Conditioning
JHD	Joint House Department
JWP	Joint Working Party on Energy Efficiency in Commonwealth Government Operations
LPA	Liquid Pressure Amplification
NAFC	National Average Fuel Consumption
NatHERS	National House Energy Rating Scheme
PCA	Property Council of Australia
PM&C	Department of the Prime Minister and Cabinet
POE	Property Operating Expenses
POEE	Post Occupancy Energy Evaluations
PPMP	Planned Preventative Maintenance Program
PWC	Parliamentary Standing Committee on Public Works
The BOMA Guidelines	The 1994 BOMA Energy Guidelines
Treasury	Commonwealth Department of the Treasury
Veterans' Affairs	Commonwealth Department of Veteran's Affairs

Glossary

Agencies. Commonwealth organisations agencies bound by the Financial Management and Accountability Act (see FMA Act Part 3, section 5) and those covered by the Commonwealth Authorities and Companies Act (see the CAC Act Part 3, Division 1, Section 7) whose operations were substantially budget-dependent. This description is that used in the Energy Policy.

Appliance ‘Star’ Ratings. Appliance ‘Star’ Ratings provide a means by which consumers can make informed decisions based on energy efficiency about the model of an appliance to purchase. Presently they may apply to refrigerators, freezers, dishwashers, airconditioners, washing machines, clothes dryers and gas appliances. Appliances which are labelled may vary between Australian States and Territories. In the future ratings may apply to electric water heaters and electric cookers. Information is provided by a label which explains how much electricity is used under standardised operating conditions. The label also indicates energy efficiency by a star rating from one to six.

BOMA Energy Guidelines (the BOMA Guidelines). The 1994 BOMA Energy Guidelines were prepared by the Victorian Division of the Building Owners and Managers Association of Australia Limited (BOMA). BOMA has since been reconstituted as the Property Council of Australia (PCA). The PCA describes the BOMA Guidelines as:

Energy Management Guidelines providing clear practices and norms to enable designers, owners and managers of commercial property to specify low energy targets in managing existing buildings and developing new projects. Topics included in the Guidelines are:

- *design criteria for environmental comfort and energy efficiency;*
- *designing a building for low energy consumption;*
- *designing building services for low energy consumption;*
- *design to make best use of electricity tariffs; and*
- *computer programs for building design and energy consumption analysis.*

Coordinating Agency. An agency with a co-ordinating role for the Energy Policy. The Department of Industry, Science and Resources (DISR) and the Australian Greenhouse Office (AGO) assumed coordinating agency roles regarding the Energy Policy. At the start of the audit the Department of Primary Industries and Energy (DPIE) and the Department of Finance

and Administration (DOFA) had this coordinating agency role. The coordinating agency role was described by the DPIE Secretary as:

Responsibility for administering the overall policy resides with the Departments of Primary Industries and Energy and Finance and Administration, consulting with the Department of the Environment as appropriate. Since the October 1998 Federal Election the Government has moved the Resources and Energy Group of the former DPIE to DISR and the AGO assumed program responsibility for what were originally DOFA's Energy Policy functions.

Energy Audit(s). An energy audit is a periodic examination of an energy system (or part of the system) to identify where energy is being used and in what proportions, to ensure the most appropriate sources of energy are employed, and that this energy is used as efficiently as possible. There are two main types of energy audit; the historical energy audit (the simplest and least expensive) and the diagnostic energy audit. Historical energy audits are a collation of information from records showing where, when and in what form energy is being used in an organisation. Historical energy audits generally are confined to measures of overall consumption. A diagnostic energy audit adds to the historical audit by providing a technical analysis of components and/or processes of energy use, and is used to identify the amount of energy expended by a certain machine, portion of a process or a total process.

Energy Performance Contracting (EPC). A form of contracting for energy efficiency services or broader facilities improvement. The contractor guarantees a level of energy consumption savings, modifies the energy using plant at its own expense to achieve the consumption targets, and is repaid over a number of years from the resulting stream of energy cost savings. EPC provides access to private sector capital, technology and technical expertise at minimal up-front cost to the client.

The Energy Policy. The Prime Minister's 20 November 1997 statement, *Safeguarding the Future: Australia's Response to Climate Change*, included a package of energy efficiency measures for Commonwealth agencies; these will be referred to as the Energy Policy throughout this report.

Chief Executive Officers. Secretaries of departments of state and heads of agencies.

National House Energy Rating Scheme (NatHERS). A scheme which allows the energy efficiency of housing to be rated on a consistent basis so one house may be more easily compared with another based on its heating and cooling needs. The Energy Management Task Force (EMTF) of the Australian and New Zealand Minerals and Energy Council

(ANZMEC) is developing the concept into a practical program for implementation by States and Territories. ANZMEC comprises Ministers from New Zealand, Commonwealth, State and Territory Governments.

Post Occupancy Energy Evaluation(s) (POEE). A POEE is a combination of POE and energy audit methodology.

Post Occupancy Evaluation(s) (POE). A systematic evaluation of the overall performance of a building undertaken 12 months after occupation, or the completion of the full cycle of seasons. The approach has international agreement and extends beyond energy matters, considering the fitness for purpose of the building measured against the building brief and user requirement, technical performance, user satisfaction and costs in use.

Recoverable outgoings. The ANAO regards '*recoverable outgoings*' as being building expenses which cannot be directly attributed to any tenant and which are recovered from all tenants in a proportional way; for example, the cost of operating lifts, the cost of heating and lighting common use areas and maintenance of the building airconditioning units.

The April 1998 letter. Letter from the Secretary of the former Department of Primary Industries and Energy (DPIE) to all heads of Commonwealth agencies describing the Energy Policy dated 15 April 1998. See Appendix 3 for the description.

The Energy Policy. The Government's requirements for improvements to energy efficiency in Commonwealth Operations. Announced by the Prime Minister on 20 November 1997, and which DPIE's Secretary promulgated in his 15 April 1998 letter to heads of agencies.

US EPA Energy Star Compliant. Introduced in the United States in 1992, the US Environment Protection Agency Energy Star Standard defines energy savings specifications for personal computers monitors, faxes, laser printers and photocopiers. The key specification is that the equipment has power management features which provide the ability for the equipment to automatically reduce power consumption at idle to a minimum performance level: these features are enabled at the time of supply. There is a difference, in energy consumption, of up to 75 per cent between when the Energy Star features are enabled and when they are not enabled.

Summary and Recommendations

Summary

Introduction

1. The Prime Minister's *Safeguarding the Future: Australia's Response to Climate Change* statement of 20 November 1997 announced a national greenhouse gas emissions policy. In making this announcement the Prime Minister noted that the statement replaced and far exceeded random and disjointed projects that existed previously. The policy provides a package of energy efficiency and other measures which were described as follows:

- reduction of Australia's net greenhouse emissions growth from 28 to 18 per cent or some 39 million tonnes of emissions. This is a reduction of approximately one third in Australia's expected net emissions growth, for all energy uses, from 1990 to 2010;
- \$180 million Commonwealth Government funding over five years for greenhouse abatement measures. Most of this expenditure will be on completely new measures which include non-government energy efficiency initiatives. Some existing programs are to be substantially expanded;
- targeting of realistic, cost effective reductions in key sectors where emissions are high or growing strongly, while also fairly spreading the burden of action across the economy; and
- addressing emissions across many sectors—residential, industry, transport, energy, agriculture, forestry and government operations—in an integrated, effective, and fair way.

2. The policy was stated before and during the Third Climate Change Conference in Kyoto, Japan in November 1997. The Parties to the Conference agreed to differentiate emission commitments.

3. Improving Energy Efficiency in Commonwealth Government Operations (the Energy Policy) was addressed by the Prime Minister as a specific, separately identifiable program of the overall national greenhouse gas reduction policy. No budget was allocated to this program. The Secretary of the former DPIE in a letter dated 15 April 1998 (referred to as the April 1998 letter) interpreted and promulgated the Energy Policy to secretaries of departments of state and heads of agencies (referred to here as CEOs). The ANAO regards the April 1998 letter as the definitive description and interpretation of the Energy Policy for Commonwealth Government agencies.

4. The Energy Policy includes several review and reporting processes; establishes agency energy use targets to be achieved by 2002–03; and requires various energy standards and related requirements to be achieved and implemented. The Energy Policy requirements are summarised in Table 1.

Table 1
Summary of Energy Policy requirements

<i>The role of agencies</i>
<ol style="list-style-type: none"> 1. Achievement of energy use performance targets. 2. CEO accountability. 3. Conduct of energy audits. 4. Use of renewable energy technologies. 5. Adherence to Commonwealth building energy use guidelines. 6. Negotiation of particular central services energy payment arrangements in leases. 7. Adherence to energy use guidelines for new houses. 8. Adherence to energy use guidelines for existing houses. 9. Adherence to electrical appliances and equipment energy performance standards. 10. Adherence to vehicle fuel efficiency standards. 11. Annual reporting to respective Minister. 12. Annual reporting to DISR.
<i>The role of coordinating agencies</i>
<ol style="list-style-type: none"> 1. Overall administrative responsibility. 2. Conduct of reviews. 3. Annually reporting whole-of government energy use to Parliament. 4. Revision of Commonwealth building energy use guidelines. 5. Revision of electrical appliance and equipment energy performance standards. 6. Development of vehicle fuel efficiency standards. 7. Establishment of an advisory service.

The 1998 National Greenhouse Strategy

5. In November 1998 the Ministers for the Environment and Heritage and for Industry, Science and Resources jointly unveiled a *new blueprint for national action to reduce greenhouse gas emissions* titled *The National Greenhouse Strategy*. The strategy (which is a joint Commonwealth, state and territory initiative) represents a further development of the Prime Minister’s November 1997 statement and reflects consultations with State, Territory and local governments, industry and the outcome of the 1998 Climate Change Conference in Buenos Aires.

6. The National Greenhouse Strategy (among other things) generally reiterates the Energy Policy; it emphasises particular features of the Energy Policy such as agencies leading by example to ensure that their procurement and operations maximise energy efficiency; and it reinforces CEO responsibility to their Ministers for energy performance.

7. While the focus of the audit was the Energy Policy, as promulgated by the April 1998 letter, the above features of the National Greenhouse Strategy have been taken into account in relevant parts of this audit report.

Audit objectives and scope

8. The objectives of this audit were to form an opinion on the management of Commonwealth agencies' compliance with the Commonwealth's energy efficiency requirements and to identify areas for better practice in energy management by those agencies.

9. The audit focused on:

- implementation of the Energy Policy by Commonwealth agencies. The latter were defined by the Energy Policy to include those agencies bound by the Financial Management and Accountability Act and those covered by the Commonwealth Authorities and Companies Act whose operations were substantially budget dependent;
- promulgation by coordinating and other agencies of energy use targets and associated requirements;
- energy and associated reporting by Commonwealth agencies;
- identification, examination and analysis of systemic and procedural impediments to achieving the Energy Policy; and
- development and discussion of ways to address these impediments.

10. This audit was conducted within 12 months of the announcement of the Energy Policy. While the Government required agencies to implement a number of the Energy Policy requirements within that period, the energy use targets were required to be achieved by 2002–03. Consequently the ANAO did not necessarily expect to find full compliance with all parts of the Energy Policy. This notwithstanding, the ANAO anticipated that Commonwealth agencies should have developed, or be in the process of developing, systems and procedures to implement the Commonwealth's energy management requirements. This was the main criterion against which the performance of Commonwealth agencies was audited.

11. The ANAO refined this approach during the course of the audit following extensive discussions with officers in coordinating and other agencies. As a result, and after consultation with DISR and AGO, the ANAO developed an Energy Policy Compliance Model which, apart from indicating the above mentioned requirements, may be adopted by agencies having regard to the scale of their operations and/or significance of their energy use (see Table 5 Chapter 2).

12. The ANAO audited selected Commonwealth agencies first to determine which had actually received notice of the Energy Policy, and second, whether the details of the Energy Policy had been promulgated to the appropriate functional areas. This was followed by an examination of general energy efficiency activities with a view to determining whether appropriate systems and procedures were in place.

13. The ANAO also audited the activities of those coordinating agencies with Energy Policy responsibilities. These were the former Department of Primary Industries and Energy (DPIE), the Department of Industry Science and Resources (DISR), the Department of Finance and Administration (DOFA) and, to a lesser extent, the Australian Greenhouse Office (AGO). These examinations included acquisition and analysis of planning and budget documents (including an analysis of their consistency with the Energy Policy) and the documentation of operations against the planned activities and the status and outcome of these activities.

14. The activities of the Energy and Environmental Services Unit (EESU) of DOFA were of special interest. The EESU has particular functions established by the Energy Policy. Following the October 1998 election, it was proposed to move the EESU from DOFA to DISR. This occurred in December 1998 when EESU was established as a program within DISR. Subsequently in January 1999, the EESU moved to the AGO. The establishment of the AGO was announced in the Prime Minister's November 1997 greenhouse gas statement. The AGO was delegated temporary (two year) authority to implement (among other things) several greenhouse gas related programs administered by other Commonwealth agencies. These administrative changes resulted in the EESU's activities being put 'on hold' and the AGO assuming a more direct role in implementing the Energy Policy.

Key findings

Overall audit opinion

15. The ANAO is of the opinion that:

- the 12 Energy Policy requirements, which apply to the agencies defined in paragraph 9, have been met to varying degrees. Table 2 outlines the summary of findings;
- significant practical and administrative issues require resolution before an appropriate level of compliance with many of the Energy Policy requirements is achieved by those agencies; and
- many systems and procedures required by the Energy Policy remain to be developed by both coordinating and other agencies.

16. These findings notwithstanding:

- the whole-of-government DISR report on *Energy Use in Commonwealth Operations 1997–98* indicates that the Commonwealth Government is relatively close to achieving the energy use targets which are the primary objective of the Energy Policy;
- significant energy efficiency activity was found to be occurring in many agencies. This activity includes both the development of systems and procedures to comply with the Energy Policy as well as the day-to-day management of work practices and facilities. The general difference between these activities is that the former deal predominantly with matters such as the energy efficient design of buildings, while the latter are about the energy efficient operation of these facilities (see the case studies in Appendix 6 for examples); and
- while compliance with the requirements of the Energy Policy by agencies will facilitate the achievement of the energy use targets, the implementation of other energy efficiency activities, which can and are being undertaken by agencies without strictly complying with the mandatory requirements of the Energy Policy, has the potential to more efficiently and effectively result in the achievement of the energy use targets. Examples of agencies' other energy efficiency initiatives include changing the type and operation of lights and heating, and enabling the energy efficiency features of electrical equipment and appliances.

17. Given that:

- many of the Energy Policy requirements are mandatory;
- there are significant practical impediments to agencies complying with many of the requirements of the Energy Policy; and
- agencies have approximately three and one half years until the energy use targets are required to be achieved;

the ANAO considers there is a risk that the momentum, developed to date, towards greater energy use efficiency could falter due to agencies focusing only on compliance with the mandatory Energy Policy requirements at the expense of other more cost efficient energy efficiency initiatives.

18. The ANAO has made seven recommendations to improve the efficiency and effectiveness of Energy Policy implementation. In addition, the ANAO, DISR and AGO are developing a Better Practice Guide to assist agencies in achieving better results in energy management.

General conclusion—agencies

Table 2

Summary of ANAO findings in relation to agency compliance with the Energy Policy

<i>Energy Policy agency requirement (see Table 4)</i>	<i>General ANAO findings</i>
1. Achievement of energy use performance target.	On average, by 2002–03 the Commonwealth's use of energy for tenant lighting and power in office buildings requires 35 per cent improvement; 12 per cent improvement for the office building central services energy use; and 17 per cent improvement for Defence establishments. The December 1998 DISR report stated that: <ul style="list-style-type: none"> • agencies must make a substantial effort to achieve the first target; • agencies were on track to achieve the second target; and • the Department of Defence was developing an energy management contract that should significantly reduce excess energy use. Comparative statistics are not available because this is the first time that these statistics have been calculated.
2. CEO accountability.	Variable standard (see Recommendation 2).
3. Conduct of energy audits.	Low level of compliance. There is a high risk that the energy auditing requirement of the Energy Policy will not be complied with unless adequate systems and procedures are developed.

<i>Energy Policy agency requirement (see Table 4)</i>	<i>General ANAO findings</i>
4. Use of renewable energy technologies	Compliance not examined. DISR had not advised agencies of this component of the Energy Policy requirements in material distributed to Commonwealth agencies. DISR is addressing this omission.
5. Adherence to Commonwealth building energy use guidelines	Low level of compliance. There are significant practical problems impeding compliance.
6. Negotiation of particular central services energy payment arrangements in leases	Low level of compliance. There are significant practical problems impeding compliance.
7. Adherence to energy use guidelines for new houses	Low level of compliance.
8. Adherence to energy use guidelines for existing houses	Low level of compliance. Development of systems and procedures for undertaking these assessments has been 'on hold' awaiting the relocation of the EESU.
9. Adherence to electrical appliances and equipment energy performance standards	There is a high level of compliance. This is not due, however, to the Energy Policy.
10. Adherence to vehicle fuel efficiency standards	Not applicable. The AGO is developing vehicle energy use standards with industry.
11. Annual reporting to respective Ministers	Incomplete compliance. (see Recommendation No.3)
12. Annual reporting to DISR	Full compliance.

General conclusion—coordinating agencies

Table 3

Summary of ANAO findings in relation to coordinating agency compliance with the Energy Policy

<i>Energy Policy coordinating agency requirement</i>	<i>General ANAO findings</i>
1. Overall administrative responsibility	While DISR's policy interpretation was suitable for immediate needs, further revision and refinement are now required (see Recommendation No.6). DISR has adequately promulgated the policy. DISR and the AGO need to finalise coordination systems and procedures. Some of DISR's and the AGO's leadership systems and procedures are well established, others require development (see Recommendation No.7).

Energy Policy coordinating agency requirement	General ANAO findings
2. Conduct of reviews	DISR and the AGO need to establish review systems and procedures. DISR is addressing this issue.
3. Annually reporting whole-of-government energy use to Parliament	DISR has fully complied with this requirement.
4. Revision of Commonwealth building energy use guidelines	Progress has been 'on hold' awaiting the relocation of the EESU (see Recommendation No. 8). In February 1999, the AGO submitted a proposal to the Government to resolve this issue. At the time of writing this report the AGO had not been informed of any related decision.
5. Revision of electrical appliance and equipment energy performance standards	Little progress. No Commonwealth agency had been assigned responsibility for this assessment (see Recommendation No.6).
6. Development of vehicle fuel efficiency standards	The AGO has not, and is not required to have, finalised vehicle energy use standards with industry.
7. Establishment of an advisory service	To October 1998, DOFA had made adequate progress (see Recommendation No.8). Further progress has been 'on hold' awaiting the relocation of the EESU.

The Australian Greenhouse Office's general response to the audit report

19. The AGO agreed with all the recommendations and, in commenting on the audit report, advised that:

During the Audit, the ANAO formed a close working and effective relationship with both the Government Operations Program of the Australian Greenhouse Office and with our colleagues from the Resources and Energy group of the Department of Industry, Science and Resources. The ANAO team was firmly focused on delivering an effective outcome for Government by driving continuous improvement.

This strong working relationship is being built on through collaboration between our agencies in the development of a CEO's Better Practice Guide to Energy Management – which will greatly assist in getting the energy efficiency message out to agencies.

I believe that the Audit Report is a balanced and useful document and that the Audit has been valuable to the Commonwealth, particularly in:

- *Assisting in ongoing refinement of the Commonwealth policy; and*

- *Ensuring that line agencies are fully informed as to their role and responsibilities in implementation of the Policy.*

20. In relation to paragraphs 16 and 17, AGO advised:

AGO Government Operations Program has always stressed to agencies that substantial energy efficiency improvements are achievable through simple housekeeping measures that require little or no capital investment. These are often non-technical, staff-based initiatives that also have spin-offs in people's interaction with the Environment at a personal and family level. It is important that agencies do not lose sight of this fact – and that they focus on housekeeping and facility management initiatives as one of a series of energy efficiency measures that are appropriate.

The Energy Policy does not try to direct agencies towards high expenditure program, but towards consideration of a range of options that includes good housekeeping, effective facilities management practices, energy performance contracting and other options. Indeed, achievement of the mandatory energy performance targets will be impossible unless agencies consider a range of measures and implement the ones most appropriate to their particular circumstances.

The asset management cycle – from initial project conception through construction delivery to eventual occupation and facility management - is totally interdependent. Given that approximately 90 per cent of the total cost of a facility is attributable to its long term operating costs, it is essential that every stage of the process be effectively managed to gain maximum benefit in terms of functionality and operational performance. No matter what energy efficiency features designed and built into a building, the building will not achieve performance targets unless it is effectively managed.

The Department of Industry Science and Resources general response to the audit report

21. DISR advised, in commenting on the audit report:

We have studied the draft report and agree with all the recommendations.

Preparation of the report was being carried out at a time of extensive rationalisation of the Commonwealth buildings portfolio and this has posed challenges both for implementation of the policy and for preparation of the report. In this context, we note that completion on time of the first Whole of Government Energy Report by the Domestic Energy and Environment Branch of this Department was greatly assisted by the process of conducting this audit and by the interaction with your staff.

It is worth mentioning two of the more significant issues.

We feel that undue emphasis may have been given in the report to the fact that the existing policy on Government operations does not explicitly mention requirements about day-to-day management of building facilities and operations ie “housekeeping” measures (Para. 2.10).

The explanation is that the policy was purposely non- prescriptive in this area on the understanding that these requirements would be included, as a matter of course, in any departmental energy management plan. Also the policy includes the mandatory requirement for energy audits, which routinely identify “housekeeping“ opportunities, which CEOs are encouraged to exploit.

The other point concerns the discussion following Recommendation No. 6 (Para. 3.20) where the report states that the coordinating bodies (ISR and the AGO) should encourage other agencies to become members of the Greenhouse Challenge in order to address the Government’s requirement to lead by example.

We support the notion that individual agencies should join the Greenhouse Challenge, where they wish to do so. However, this course should not be presented as an equal and satisfactory alternative to implementing the existing mandatory policy, which in our view provides a comprehensive framework within which the required energy savings and greenhouse gas emissions reductions can be achieved.

Recommendations

22. As indicated in Chapter 1, the ANAO audited selected Commonwealth agencies first to determine which had actually received notice of the Energy Policy, and second, whether the details of the Energy Policy had been promulgated to the appropriate functional areas. This was followed by an examination of general energy efficiency activities with a view to determining whether appropriate systems and procedures were in place. Due to the general applicability of recommendations 1, 2 and 3, a selection of the agencies, examined during the course of the audit, were asked to comment on just these three recommendations; ie:

- Attorney General's Department (Attorney-General's);
- Australian Greenhouse Office (AGO);
- Commonwealth Scientific and Industrial Research Organisation (CSIRO);
- Department of Defence (DOD);
- Department of Environment and Heritage (Environment Australia);
- Department of Finance and Administration (DOFA);
- Department of Health and Aged Care (DHAC);
- Department of Industry, Science and Resources (DISR);
- Department of the Treasury (Treasury); and
- Department of Veterans' Affairs (Veterans' Affairs).

The ANAO considers that all recommendations warrant the same priority.

Recommendation No.1
Para. 2.14 The ANAO recommends that agencies develop and implement a priority schedule of energy efficiency initiatives drawing on both the mandatory requirements of the Energy Policy and other non-compliance activities which involve the day-to-day management of work practices and facilities.

All agencies agreed.

Recommendation No.2
Para. 2.17 The ANAO recommends that CEO instructions clearly indicate how agencies will comply with the Energy Policy, including the method of implementing energy audits, the BOMA Guidelines and new property leases.

DOD and DOFA agreed in principle; all other agencies agreed.

Recommendation No.3
Para. 2.22 The ANAO recommends that CEOs incorporate in their Energy Policy annual report to their respective Ministers a statement that, among other things, either all the requirements of the Energy Policy were complied with or, where this did not occur, an indication of the areas of non-compliance and steps being taken to remedy the situation.

Attorney-General's, DOD and DOFA agreed in principle; all other agencies agreed.

Recommendation No.4
Para. 2.23 The ANAO recommends that the Department of Industry Science and Resources and the Australian Greenhouse Office advise the Department of Prime Minister and Cabinet (PM&C) of the Energy Policy annual reporting requirements so they may be taken into account in the next review of PM&C's *Guidelines for the Preparation of Departmental Annual Reports*.

AGO and DISR agreed.

**Recommendation No.5
Para. 3.8** The ANAO recommends that DISR's and AGO's Energy Policy interpretation should: (a) include a glossary of energy terms; (b) clearly highlight the requirements that are mandatory and those that are not; (c) provide lists of which agencies have particular responsibilities; (d) identify, for each requirement if applicable, which agency is developing related standards, systems and/or procedures; (e) provide an organisation chart or use some other suitable approach which clearly indicates the links between the agencies involved in the general administration of the Energy Policy; (f) indicate that action is required well before 2002-03 to achieve compliance with the Energy Policy and to realise the benefits of energy efficiency initiatives; and (g) take into account practical limitations to implementing mandatory requirements.

AGO and DISR agreed.

**Recommendation No.6
Para. 3.19** The ANAO recommends that DISR and AGO include measures in their formal Energy Policy implementation plans which address the Government requirement to 'lead by example'.

AGO and DISR agreed.

**Recommendation No.7
Para. 3.44** The ANAO recommends that the AGO finalise, as a matter of priority, the EESU's new administrative arrangements, work schedule and resourcing to ensure that the 10 EESU functions are achieved efficiently and effectively.

AGO agreed.

Audit Findings and Conclusions

1. Background

Objectives of the audit

1.1 The objectives of this audit were to form an opinion on the management of Commonwealth agencies' compliance with the Commonwealth's energy efficiency requirements and to identify areas for better practice in energy management by those agencies.

Reason for and focus of the audit

1.2 Two Auditor General reports (No.47 of 1991–92, *Energy Management of Commonwealth Buildings*, and No.10 of 1996–97, Follow-up of Report No. 47) focused on implementation of previous Commonwealth Government energy policies. These reports identified impediments to the achievement of those policies (Appendix 1 briefly describes these pre-November 1997 energy policies and related impediments). On 20 November 1997, the Prime Minister made a statement on the Government's greenhouse gas emission policy. The statement, *Safeguarding the Future: Australia's Response to Climate Change*, included energy efficiency requirements of Commonwealth agencies. These requirements are referred to in this report as the Commonwealth's Energy Policy. In light of the Prime Minister's statement, the ANAO decided to conduct a preliminary study to determine if there were remaining significant impediments to implementing the Government's requirements of Commonwealth agencies. The ANAO conducted the audit because the preliminary study showed that there were significant impediments to achieving the Energy Policy requirements.

1.3 The audit focused on:

- implementation of the Energy Policy by Commonwealth agencies. The latter were defined by the Energy Policy to include those agencies bound by the Financial Management and Accountability Act and those agencies covered by the Commonwealth Authorities and Companies Act whose operations were substantially budget-dependent;
- promulgation, by coordinating and other agencies, of energy use targets and associated requirements;
- activities of Commonwealth agencies regarding the use of energy and associated reporting;
- identification, examination and analysis of system and procedural impediments to achieving of the Energy Policy; and
- development and discussion of ways to address such impediments.

The 1997 Energy Policy

1.4 The Prime Minister's *Safeguarding the Future: Australia's Response to Climate Change* statement (20 November, 1997, see Appendix 2) announced a national greenhouse gas emissions policy. In making his announcement, the Prime Minister noted that the package replaced and far exceeded random and disjointed projects that existed previously. The policy provides a package of energy efficiency and other measures which include:

- reduction of Australia's net greenhouse emissions growth from 28 per cent to 18 per cent or some 39 million tonnes of emissions. This is a reduction of approximately one-third in Australia's expected net emissions growth, for all energy uses, from 1990 to 2010;
- \$180 million Commonwealth Government funding over five years for greenhouse abatement measures. Most of this expenditure will be spent on completely new measures which include non-government energy efficiency initiatives. Some existing programs are to be substantially expanded;
- targeting of realistic, cost effective reductions in key sectors where emissions are high or growing strongly, while also fairly spreading the burden of action across the economy; and
- addressing emissions across many sectors—residential, industry, transport, energy, agriculture, forestry and government operations—in an integrated, effective, and fair way.

1.5 The policy was stated before and during the Third Climate Change Conference in Kyoto, Japan in November 1997. The Parties to the Conference agreed to differentiate emission commitments.

1.6 Improving energy efficiency in Commonwealth Government operations (the Energy Policy) was addressed by the Prime Minister as a separate program of the overall national greenhouse gas reduction policy which contained 24 programs. The Energy Policy was interpreted and promulgated to CEOs by the Secretary of the former DPIE in a letter dated 15 April 1998 (see Appendix 3). For this audit, the ANAO regarded the April 1998 letter as the definitive description of the Energy Policy for Commonwealth Government agencies. None of the \$180 million mentioned above was directly allocated to the Energy Efficiency in Commonwealth Government operations component of the greenhouse gas reduction policy.

1.7 The Energy Policy includes several review and reporting processes; establishes agency energy use targets (to be achieved by 2002–03); and requires various energy standards and related requirements to be achieved and implemented. The Energy Policy requirements are summarised in Table 4. A comparison between these requirements and those in place prior to November 1997 confirms that many of the measures included in the Energy Policy are based on pre-November 1997 energy policies. An appreciation of the origins of the Energy Policy is important in explaining the level of energy efficiency activity observed during the course of the audit.

Table 4

Summary of the Energy Policy requirements

<i>The role of agencies</i>	
1.	<p>Achievement of energy use performance target. All agencies are to ensure that all commercial office space that they own or lease meets Commonwealth energy use performance targets by 2002–03. These standards are:</p> <ul style="list-style-type: none"> • 10 000 mega joules per person per annum energy use target set for office buildings tenant lighting and power; • 500 mega joules per square metre per annum target set for office building central services; and • a total of 2.5 million giga joules per annum for DOD establishments covering all buildings and facilities within the umbrella of established DOD bases.
2.	<p>CEO accountability. All heads of departments of state and agencies subject to the <i>Financial Management and Accountability Act 1997</i> and the <i>Commonwealth Authorities and Companies Act 1997</i> more than 50 per cent funded through Appropriation Acts are accountable to their Ministers for their organisation’s performance in improving energy efficiency.</p>
3.	<p>Conduct of energy audits. All agencies are to undertake energy audits (EAs) (or approved alternative energy use assessments) of all commercial buildings within the first year of occupancy and at intervals not exceeding five years thereafter. All resulting cost effective recommendations must be implemented.</p>
4.	<p>Use of renewable energy technologies. All agencies are to use solar and other renewable energy technologies where relevant and cost effective.</p>
5.	<p>Adherence to Commonwealth building energy use guidelines. All agencies are to ensure that all newly constructed or substantially refurbished commercial buildings that they own or buildings where the agency is majority lessor, meet Commonwealth building energy use guidelines.</p>
6.	<p>Negotiation of particular central services energy payment arrangements in leases. All agencies are to ensure that all new leases entered into, include the requirement that building owners be responsible for paying the energy costs for central services and that building owners not recover these costs directly from the Commonwealth or through recoverable outgoings.(see Glossary).</p>
7.	<p>Adherence to house energy use guidelines—new houses. All agencies are to ensure that all new houses that they own or lease, meet Commonwealth energy use guidelines.</p>

The role of agencies

8. **Adherence to housing energy use guidelines—existing houses.** All agencies, subject to the results of a sample survey to be carried out by the EESU, are to upgrade their owned or leased houses to meet the Commonwealth energy use guidelines.
9. **Adherence to electrical appliances and equipment energy performance standards.** All agencies are to ensure that all newly procured electrical appliances and equipment meet Commonwealth energy performance standards.
10. **Adherence to vehicle fuel efficiency standards.** All agencies are to ensure that all newly procured vehicles meet Commonwealth fuel efficiency standards from 2003.
11. **Annual reporting to respective Minister.** All agencies are to annually report their energy performance to their Ministers.
12. **Annual reporting to DISR.** All agencies are to annually report their energy consumption and intensity statistics to DISR.

The role of coordinating agencies

1. **Undertaking overall administrative responsibility.** DISR and AGO are to assume overall administrative responsibility for the Energy Policy.
2. **Conducting reviews.** Periodic reviews of the program are to occur and an independent review is to be conducted after two years of operation reporting to the Government.
3. **Annually reporting whole-of-government energy use to Parliament.** DISR is to annually report whole-of-government energy use statistics to the Government.
4. **Revising of Commonwealth building energy use guidelines.** AGO is to review and update the energy use guidelines for Commonwealth-owned and leased non-residential buildings.
5. **Revising of the electrical appliances and equipment energy performance standards.** Industry will be consulted with a view to lifting this Commonwealth standard to the five-star level by 2000.
6. **Developing vehicle fuel efficiency standards.** AGO is to develop Commonwealth vehicle fuel efficiency standards.
7. **Establishment of an advisory service.** AGO will establish an advisory service, with 10 specified functions.

The 1998 National Greenhouse Strategy

1.8 In November 1998 the Ministers for the Environment and Heritage and for Industry, Science and Resources jointly unveiled *a new blueprint for national action to reduce greenhouse gas emissions* called *The National Greenhouse Strategy*. The strategy (which is a joint Commonwealth, state and territory initiative) represents a further development of the Prime Minister's November 1997 statement and reflects consultations with State, Territory and local governments, industry and the 1998 Climate Change Conference in Buenos Aires.

1.9 The National Greenhouse Strategy describes the framework for effective implementation and divides the subject matter into eight modules:

- profiling Australia's greenhouse gas emissions;
- understanding and communicating climate change and its impacts;
- partnerships for greenhouse action: governments, industry and the community;
- efficient and sustainable energy use and supply;
- efficient transport and sustainable urban planning;
- greenhouse sinks and sustainable land management;
- greenhouse best practice in industrial processes and waste management; and
- adaptation to climate change.

1.10 The National Greenhouse Strategy lists a number of specific performance indicators of such items as emissions per capita, emissions from household energy per capita and methane emissions from landfill per capita. Targets will be developed in 1998–99.

1.11 In addition, the National Greenhouse Strategy generally reiterates the Energy Policy. It emphasises particular features of the Energy Policy, such as agencies leading by example in ensuring their own procurement and operations maximise energy efficiency, and it reinforces CEO's responsibility to their Ministers for energy performance. Appendix 4 provides more details.

1.12 While the focus of the audit was the Energy Policy, as promulgated by the April 1998 letter, the above listed features of the National Greenhouse Strategy have been taken into account in relevant parts of this audit report.

Audit methodology and cost

1.13 This audit was conducted within 12 months of the announcement of the Energy Policy. While the Government required agencies to implement a number of the Energy Policy requirements within that period, the energy use targets were required to be achieved by 2002–03. Consequently the ANAO did not necessarily expect to find full compliance with all parts of the Energy Policy. This notwithstanding, the ANAO anticipated that Commonwealth agencies should have developed, or be in the process of developing, systems and procedures to implement the Commonwealth's energy management requirements. This was the main criterion against which the performance of Commonwealth agencies was audited.

1.14 The ANAO audited selected Commonwealth agencies first to determine whether the Energy Policy had been received by agencies and promulgated to the appropriate functional areas. This was followed by an examination of general energy efficiency activities with a view to determining whether appropriate systems and procedures were in place. These agencies were selected using the following criteria:

- size and structure of overall portfolio/agency property holdings to provide:
 - a balance between those with large holdings and small holdings; and
 - a balance in the composition of property holdings between ownership and leasing, commercial office space, housing and other properties;
- distribution of properties within portfolios, both geographically and between agencies;
- nature and scope of activities undertaken, for instance, agencies whose activities were more likely to use office space;
- agencies recommended to the ANAO as representing best practice; and
- agencies identified to the ANAO as being active in energy management.

1.15 The ANAO also audited the activities of those coordinating agencies with Energy Policy responsibilities. These were the former Department of Primary Industries and Energy (DPIE), the Department of Industry Science and Resources (DISR), the Department of Finance and Administration (DOFA) and, to a lesser extent, the Australian Greenhouse Office (AGO). These examinations included acquisition and analysis of planning and budget documents (including an analysis of their consistency with the Energy Policy), the documentation of operations against the planned activities and the status and outcome of these activities.

1.16 The audit:

- has been carried out in accordance with ANAO Auditing Standards applicable to performance audits;
- was undertaken between July 1998 and June 1999; and
- cost \$195 000.

Agencies subject to the Energy Policy

1.17 The April 1998 letter stated that the Energy Policy applied:

... to all Commonwealth departments as well as agencies and bodies whose operations are substantially budget-dependent. (Applies to all agencies and bodies covered by the Financial Management and Accountability [FMA] Act and all those covered by the Commonwealth Authorities and Companies [CAC] Act and whose operations are substantially budget-dependent).

1.18 This definition left considerable scope for interpretation given that there are hundreds of statutory and non-statutory bodies in addition to departments of state all of which occupy office accommodation and use energy in their operations. The former DPIE eventually decided on a list of 170 agencies of whom 119 (due to some aggregation) were expected to return an annual energy use report.

1.19 At the commencement of this audit three agencies had coordination roles regarding the Energy Policy:

- the Department of Primary Industries and Energy;
- the Department of Finance and Administration; and
- the Australian Greenhouse Office.

1.20 At the time of finalising this report, DISR and the AGO now jointly administer the Energy Policy. Also involved is the Joint Working Party on Energy Efficiency in Commonwealth Government Operations (JWP), jointly administered by DISR and AGO. DISR advised that the JWP's terms of reference and areas of responsibility had been approved. However, in the JWP's meetings attended by the ANAO, it was clear that the JWP's role was still being developed. The JWP was established initially as a direct response to previous ANAO audit recommendations dealing with implementation of previous Commonwealth energy policies. The JWP held its first meeting on 29 May 1998. At the time of printing this report the draft terms of reference documented in Appendix 5 were being circulated.

1.21 DISR's Domestic Energy and Environment Branch, Resources and Energy Group is directly involved in overall administration of the Energy Policy. This Branch also has specific responsibilities regarding delivery of an annual whole-of-government energy use report.

1.22 The AGO was established in 1997–98 as a separate agency within the Environment Portfolio to provide a whole-of-government approach to greenhouse matters. The AGO has been delegated responsibility for implementing the majority of the programs within the Commonwealth Government's \$180 million climate change package, *Safeguarding the*

Future: Australia's Response to Climate Change (see Appendix 1 for a full list of these programs). Of particular interest to this audit were the AGO's activities regarding the following programs:

- Energy Performance Codes and Standards for Domestic Appliances and Industrial Equipment (\$4.4 million);
- Energy Performance Codes and Standards for Housing and Commercial Buildings (\$4.4 million); and
- Environmental Strategy for Automotive Industry (\$0.5 million).

1.23 The AGO's Energy and Environmental Services Unit (EESU) was established in compliance with the Energy Policy requirement to function as an advisory and program delivery service. The Energy Policy specified 10 advisory service functions to be achieved (see Chapter 3 for more details). Many of these functions affect several other Energy Policy requirements.

1.24 In the administrative changes following the October 1998 Federal Election, the Resources Division of the former DPIE was transferred to the new Department of Industry, Science and Resources (DISR). DOFA's Energy and Environmental Services Unit (EESU) was also moved to DISR in December 1998. In January 1999 the EESU transferred to the AGO. Establishment of the AGO was announced in the Prime Minister's November 1997 greenhouse gas statement. The AGO was delegated temporary (two year) authority to implement (among other things) several greenhouse gas related programs administered by other Commonwealth agencies. The EESU is now one of the programs delegated by DISR to the AGO. The EESU, however, physically moved from DOFA direct to the AGO and was never based in DISR. These administrative changes resulted in the EESU's activities being placed 'on hold' and the AGO assuming a more direct role in implementing the Energy Policy.

1.25 The move of the Resources Division from DPIE to DISR presents a reference problem throughout this report; many references refer to information obtained from the Resources Division of the former DPIE and later confirmed by DISR, and several references and the recommendations refer to the current DISR. To overcome this, 'DISR' will be used throughout the report except in reference to the April 1998 letter and a few other specific dated references that are clearly identified.

2. The role of agencies

Introduction

2.1 Chapter 1 outlined 12 requirements of agencies generally to manage their energy use, and seven requirements of coordinating agencies.

2.2 This Chapter:

- considers the level of achievement of the energy use targets;
- summarises the ANAO findings relating to compliance with the remaining eleven Energy Policy requirements;
- draws conclusions and makes recommendations aimed at facilitating achievement of energy use targets; and
- reports the status of impediments to pre-November 1997 Commonwealth energy policies.

Achievement of energy use performance targets

2.3 Three targets were set by the Energy Policy, as follows:

All agencies are to ensure that all commercial office space that they own or lease meets Commonwealth energy performance targets by 2002–03. These standards are:

- *10 000 mega joules per person per annum energy use target set for office buildings tenant lighting and power;*
- *500 mega joules per square metre per annum target set for office building central services; and*
- *a total of 2.5 million giga joules per annum for DOD establishments covering all buildings and facilities within the umbrella of established DOD bases.*

2.4 In December 1998, DISR reported to its Minister and to Parliament on whole-of-government energy use for 1997–98 (*Energy Use in Commonwealth Operations 1997–98*, available from DISR). The results of this first round of energy use reports for 1997–98 indicated that, on average, the Commonwealth's energy use was:

- 35 per cent above the office buildings tenant lighting and power target which must be achieved by 2002–03;
- 12 per cent above the office buildings central services target for 2002–03; and
- 17 per cent above the DOD establishments target for 2002–03.

2.5 The December 1998 DISR report stated that:

- agencies must make a substantial effort to achieve the first target;
- agencies were on track to achieve the second target; and
- DOD was developing an energy management contract that should significantly reduce excess energy use. DOD advised that: *a contract has now been put in place for the first phase of the Defence Energy Efficiency Project. This will assist DOD to achieve the Government's targets.*

2.6 DISR advised that:

- there were many buildings above and below these average statistics; and
- averages were being used because it was not the intention of the Energy Policy to require all office buildings to meet the energy use targets; this would simply not be practical.

Agency compliance with the Energy Policy

2.7 As described in Chapter 1, the ANAO examined selected agencies with a view to forming an opinion regarding the level of agency compliance with Energy Policy requirements, the impediments to achieving compliance, and best practice. Table 6 summarises the ANAO's findings.

2.8 The main audit criterion used during the audit was—the ANAO anticipated that Commonwealth agencies should have developed, or be in the process of developing, systems and procedures to implement the Commonwealth's Energy Policy requirements. The ANAO refined this approach during the course of the audit following extensive discussions with officers in coordinating and other agencies. As a result, and after consultation with DISR and AGO, the ANAO developed an Energy Policy Compliance Model which, apart from indicating the Energy Policy requirements, may be adopted by agencies having regard to the scale of their operations and/or significance of their energy use (see Table 5).

Table 5**Commonwealth Energy Policy compliance model**

(The phrases energy audits, post occupancy evaluations and energy performance contracting are defined in the Glossary)

CEO accountability
<ul style="list-style-type: none"> • CEOs should interpret the Energy Policy into clear instructions and requirements consistent with Government policy. • CEOs should ensure the Energy Policy is promulgated to the following functional areas of their agencies as appropriate: <ul style="list-style-type: none"> – ministerial liaison: for reporting purposes; – portfolio coordinators (in departments of state): for portfolio promulgation and coordination purposes; – budgeting: for resourcing energy audits and energy efficiency initiatives; – planning: for identifying and scheduling the implementation of procurement needs; – procurement: for implementing procurement of property, electrical appliances and equipment, vehicles and other goods and services; – property management: for generally managing agency property needs either directly or through outsourcing; – vehicle fleet management: for generally managing agency transport needs; – legal: for protecting the Commonwealth's interests in contracts, leases and agreements; and – regional general and/or facility managers. • CEOs should ensure the appropriate financial and human resources required to implement the Energy Policy requirements are available: <ul style="list-style-type: none"> – given that the Energy Policy intends that energy efficiency initiatives will be budget neutral or result in ongoing savings, CEOs should be prepared to allocate funds to energy auditing and energy efficiency initiatives on a business basis having regard to Government requirements; – CEOs should appoint energy managers who are responsible for ensuring Energy Policy compliance; – given that most matters related to complying with the Energy Policy are not 'core business' for most Commonwealth agencies and the areas of energy and property management are likely to be outsourced, CEOs should ensure the appropriate level of skill and experience in energy and property management matters is maintained to efficiently and effectively manage the related contracts; and • Agencies should take advantage of the advisory and advocacy service available through the EESU and the Resources and Energy Group of DISR and the best practice information available through the Energy Forums organised by the EESU. • CEOs should take appropriate steps to convert the Government's requirements into operations by, among other things, establishing systems and procedures for: <ul style="list-style-type: none"> – procuring office space, other special use buildings, residential houses, electrical appliances and equipment and vehicles; and – developing a plan, or plans, to schedule and to budget for meeting the energy use targets, energy use reporting, energy auditing of commercial properties, post occupancy evaluations, EPC, renewal of leases which comply with the new requirements, implementation of building, refurbishment and other housing standards, implementation of procurement standards and implementation of vehicle standards.

Conduct of energy audits (EAs)

- Agencies should have established, or be establishing, schedules for the conduct of EAs, the EA methodology to be used and the budget/resources for completing the planned EAs. This is especially so for agencies using office space in a number of locations.
- Development of an EA schedule requires:
 - a comprehensive property register. Efficient and effective building management requires a detailed property register;
 - a lease/contract register. Such a register, cross referenced with a property register, would provide the basis for developing an EA schedule in that leases and contracts naturally contain dates and time periods; and
 - energy use data and analysis. While some energy efficiency initiatives are quite generic (for example, simple changes to schedules and more efficient lighting) energy use data is required to identify areas of energy inefficiency.

Adherence to Commonwealth building energy use guidelines

- Agencies, likely to lease or own new or newly refurbished office buildings, should:
 - instruct staff regarding the way, and the circumstances in which, the BOMA Guidelines (or their replacement) are to be complied with;
 - instruct staff regarding how to maximise building energy efficiency in circumstances in which the BOMA Guidelines (or their replacement) do not apply; and
 - ensure systems and procedures are established to provide assurance that these instructions are complied with and that compliance is verifiable.

Negotiation of leases

- Draft Commonwealth leases should contain clauses which give effect to the Energy Policy and associated requirements, including:
 - the central services energy payment arrangement;
 - energy auditing including Post Occupancy Energy Evaluations;
 - EPC;
 - energy efficiency initiatives; and
 - more sophisticated energy use and/or building monitoring systems.

Annual reporting to respective Ministers

- The annual CEO to Minister reporting requirement is the key accountability mechanism in place regarding compliance with, and achievement of, the Energy Policy. Therefore, CEOs should use this document to state that, among other things, all the requirements of the Energy Policy were complied with or, where this did not occur, to identify the areas of non-compliance and steps being taken to prevent and/or correct these situations.

Table 6**Summary of ANAO findings in relation to agency compliance with the Energy Policy (see Table 2 for summary)**

1. Achievement of energy use performance target
<p>Summary of policy statement: All agencies are to ensure all commercial office space they own or lease meets Commonwealth energy use performance targets by 2002–03.</p> <p>These standards are:</p> <ul style="list-style-type: none"> • 10 000 mega joules per person per annum energy use target set for office buildings tenant lighting and power; • 500 mega joules per square metre per annum target set for office building central services; and • a total of 2.5 million giga joules per annum for DOD establishments covering all buildings and facilities within the umbrella of established DOD bases.
<p>Findings</p> <p>In general for 1997–98:</p> <ul style="list-style-type: none"> • for office buildings—tenant light and power: the weighted average performance was 13 500 mega joules per person per annum; • for office buildings—central services: the weighted average performance was 560 mega joules per square meter per annum; and • Defence establishments used a total of 2.9 million giga joules per annum.
2. CEO accountability
<p>Summary of policy statement: All heads (CEOs) of departments of state and agencies subject to the <i>Financial Management and Accountability Act 1997</i> and the <i>Commonwealth Authorities and Companies Act 1997</i> and more than 50 per cent funded through Appropriation Acts are accountable to their Ministers for their organisation's performance in improving energy efficiency.</p>
<p>Findings</p> <p>General: There has been a variable standard in the implementation in areas such as adequate policy interpretation, intra-agency promulgation, skill and knowledge acquisition and Energy Policy achievements.</p> <p>Interpretation</p> <ul style="list-style-type: none"> • CEOs have not further interpreted the Energy Policy and have understandably relied on the DPIE interpretation of the Energy Policy (as promulgated in the April 1998 letter). As detailed in Chapter 3, this interpretation, while being generally consistent with Government decisions, is incomplete, contains errors, and requires clarification in several areas. <p>Intra-agency promulgation</p> <ul style="list-style-type: none"> • The following functional areas of agencies were found to be relevant to implementing the Energy Policy: ministerial liaison; portfolio coordinators (in departments of state); budgeting; planning; procurement; property management; vehicle fleet management; legal; and regional managers. • Intra-agency promulgation of the Energy Policy to these functional areas was found to be incomplete. In some cases the Energy Policy had not been distributed at all; but in most cases only the property managers had received the Energy Policy. Only one agency was found to have distributed the Energy Policy to regional managers. • The appointment of an energy manager is critical to the efficient and effective

implementation of the Energy Policy. Most agencies have made their facility/building branch generally responsible for implementing such policies like the Energy Policy rather than delegating this responsibility to a specific officer. In small agencies, energy management may be one part of an officer's responsibilities.

Resourcing

- While implementation of the Energy Policy is intended to be budget neutral, the implementation of some of the Energy Policy requirements will require funding.
- Some large agencies with staff in a number of sites, usually in a number of States and Territories, have retained their own specialist energy management staff.
- Some agencies had engaged consultants to provide specific energy management professional development.
- Some agencies took advantage of the then DPIE professional development in energy management which occurred in the mid 1990s, but staff movement has seen much of the expertise lost.
- Many agencies have no formal professional development or specialist staff in place but have taken advantage of the Energy Forums organised by DOFA.
- Previous ANAO audits found there was a lack of expertise in energy management matters in agencies. This audit found that new property leases were re-negotiated without reference to the Government's mandatory Energy Policy requirements.

Planning

- A few agencies have maintained energy management plans and the majority of these are general in nature.
- Some agencies are drafting new energy management plans.
- Few agencies specifically refer to energy matters within their corporate plans.
- Many agencies without formal energy management plans have developed and implemented energy efficiency/cost reduction initiatives.
- In agencies where an energy management plan exists there tends to be a more structured and comprehensive agency approach to energy efficiency.

3. Conduct of energy audits.

Summary of policy statement: All agencies are to undertake energy audits (EAs) (or approved alternative energy use assessments) of all commercial buildings occupied within the first year of occupancy and at intervals not exceeding five years thereafter. All resulting cost effective recommendations must be implemented.

Findings

General: The current level of EA activity is not significant. There is a high risk that the energy auditing requirement of the Energy Policy will not be complied with unless adequate systems and procedures are developed by both coordinating and other agencies.

- The ANAO did not expect to find much energy auditing activity during the audit because the energy targets did not have to be achieved for five years and because most agencies were informed about the Energy Policy as recently as April 1998. The ANAO did, however, find that several of the agencies studied during the audit were examining, or had recently examined selected buildings and that these examinations had included energy consumption. These examinations were not, however, titled 'energy audits' but may have been an acceptable alternative (regarding the Australian Standards).

- Only one agency was found to be establishing an EA schedule which is a compliance prerequisite for agencies using office space in a number of locations.
- Significant inadequacies (eg. numerous omissions and errors) were found in relation to property registers and energy use data and analysis which are prerequisites to establishing an EA schedule.
- A number of agencies were waiting for the EESU to develop energy auditing systems and procedures; but the EESU's progress was 'on hold' for several months pending finalisation of its move from DOFA to DISR.
- Previous ANAO audit reports found that Commonwealth EA programs experienced major implementation problems, which reduced their impact. The ANAO considers there to be a high risk that the EA component of the Energy Policy will also not succeed, taking the differences between the current and previous EA requirements into account, ie:
 - energy audits are now mandatory for agencies, ie. even if there is a low likelihood of value for money, energy audits are required for **all** owned and leased commercial buildings without exception. Recommendation No. 5 in Chapter 3 addresses this mandatory/non-mandatory issue;
 - there is no central agency regulating compliance; each agency self-regulates this requirement;
 - it is mandatory to implement all cost effective recommendations made in energy audits which raises the risk that EAs will be less than objective;
 - alternative energy use assessment methods are suggested in the form of EPC and post occupancy energy auditing. Development of these assessment methods has been 'on hold' awaiting finalisation of EESU's move from DOFA to DISR;
 - panels of qualified energy auditors, or energy performance contractors have not yet been established and further work has been 'on hold'; and
 - the energy use standards required as a prerequisite for determining energy use performance for building-to-building comparison have limited application to most Commonwealth agencies.
- Several agencies have advised that significant energy efficiencies are achievable, without undertaking formal energy audits, through implementing 'generic' energy efficiency initiatives known to return value-for-money; eg. re-lamping, de-lamping and simple changes to building operations (including the start and finish times for cleaning, and arrangements for out-of-hours lighting and air conditioning).
- DISR advised that building energy use guidelines (like the BOMA Guidelines) are not required to undertake building-specific energy audits. There are performance standards for most energy using components of buildings which can be used without developing an overall building energy use performance rating.

4. Use of renewable energy technologies

Summary of policy statement: All agencies are to use solar and other renewable energy technologies where relevant and cost effective.

Findings

General: At the time of the audit, DISR had not advised agencies of this component of the Energy Policy requirements in material distributed to Commonwealth agencies. Consequently, the ANAO did not examine whether there was compliance.

5. Adherence to Commonwealth building energy use guidelines

Summary of policy statement: All agencies are to ensure all newly constructed or substantially refurbished commercial buildings they own or buildings where the agency is majority tenant, meet Commonwealth building energy use guidelines.

The BOMA Guidelines, prepared by the former Victorian Division of the Building Owners and Managers Association of Australia Limited (BOMA) have been adopted by the Commonwealth. BOMA has since been reconstituted as the Property Council of Australia. DISR advise that the BOMA Guidelines have been adopted as a transitional standard pending development of Commonwealth standards. The section dealing with the revision of the BOMA Guidelines (paragraphs 3.25–3.32) in Chapter 3 provides more information.

Findings

General: compliance with this requirement is low and there are significant practical problems confronting agencies attempting to comply with this mandatory requirement.

- Of the agencies examined during the audit, few were found to be seeking to construct or refurbish commercial buildings. Where this part of the Energy Policy applied, the proponent agencies sought public works approval from the Parliamentary Standing Committee on Public Works (PWC). The PWC advised that reports of four investigations had been tabled in Parliament since April 1998 and that the proponent agencies had confirmed that all required energy standards had been, or would be, met.
- Regarding Commonwealth leased buildings; since the April 1998 letter, leases have been signed which do not contain any requirement that the building (or part thereof) being leased, complies with the BOMA Guidelines. The pre-November 1997 Commonwealth Tenants Lease (CTL), which has not been revised to reflect the requirements of the Energy Policy, is still being used as a template for new leases.
- Adherence to the BOMA Guidelines was generally not accorded a high priority by most agencies examined.
- There is a lack of clear guidance regarding procurement of public works. The *Commonwealth Procurement Guidelines* refer agencies (in regard to public works) to the publication *Policy Responsibilities for the Procurement of Public Works*. *This publication has not been revised and is not available.* DOFA advised that: *consistent with the devolution of responsibility to agency Chief Executives under the Financial Management and Accountability Act 1997, DOFA has no plans to re-issue the publication. This will be taken into account in the next review of the Commonwealth Procurement Guidelines.* The absence of such a document leaves each CEO in a position where a search has to be conducted to determine the relevant policies, legislation, regulations, standards, guidelines and procedures each time public works are being contemplated. DOFA advised that it agrees with this audit finding.
- There is no agency oversighting compliance; each agency self-regulates this requirement. Only the DOD maintains staff with extensive engineering expertise.
- Apart from any ANAO audit activity, the only other mechanism for independent assessment of whether agencies apply the Energy Policy to Commonwealth public works is that undertaken by the PWC. The PWC approval process does not include:
 - newly constructed or substantially refurbished commercial buildings under \$2 million;
 - newly constructed or substantially refurbished commercial buildings that are leased;

- works for which agencies do not have to seek additional funding; and
- compliance of completed newly constructed or substantially refurbished commercial buildings to the BOMA Guidelines.
- None of the four PWC-approved public works identified above are high-rise office buildings in capital cities to which the BOMA Guidelines apply. Consequently, proponent agency assertions that the Energy Policy would be complied with does not mean that the BOMA Guidelines will be complied with and no other energy use guidelines exist.
- There are some practical problems associated with the move, by Commonwealth agencies, towards leasing the majority of their office space needs from the private sector, including:
 - the limited applicability of the BOMA Guidelines presents difficulties for agencies wishing to determine if new or substantially refurbished buildings actually meet the required standard; and
 - effective agency program delivery can require agencies to be limited in their choice of building locations; this can result in agencies being in a ‘sellers office-space market’. If this occurs then the opportunities for an agency to comply with the building energy use guidelines may be substantially diminished and very much dependent on the goodwill of building owners. Evidence gathered during the audit confirms this. The mandatory nature of the application of the BOMA Guidelines does not recognise this practical constraint.

DOD advised that it: is finding major practical constraints to implementing this requirement and has been working closely with the EESU to try to resolve some of the problems. Relevant guidelines are not available for most DOD projects and there are definitional issues relating to matters such as ‘substantial’ refurbishments.

6. Negotiation of particular central services energy payment arrangements in leases

Summary of policy statement: All agencies are to ensure all new leases entered into, include the requirement that building owners be responsible for paying the energy costs for central services and that building owners not recover these costs directly from the Commonwealth or through recoverable outgoings.

Findings

General: Compliance with this requirement is low and there are significant practical problems impeding compliance.

- Lease negotiations are not unilateral and many factors other than energy efficiency will enter into the process. Consequently, the ANAO did not expect to find full compliance with this mandatory requirement.
- Since the April 1998 letter, agencies have signed accommodation leases which do not comply with this component of the Energy Policy. While some agencies could argue that information regarding the ‘new lease requirement’ was not received and/or promulgated to the right functional area, the ANAO found that 15 new leases in which DOFA was involved between 1 April 98 and 4 September 1998, also failed to comply. DOFA explained the non-compliance (20 October 1998) as being caused by the use of the Commonwealth Tenants Lease (CTL) which was drafted prior to the Energy Policy and which was a commercial style instrument that was not designed to deal specifically with energy management outside the normal commercial context of responsibility for operating expenses.
- DOFA advised (10 May 1999), when commenting on this final report, that: there

were situations where it was not in the Commonwealth's overall best interests to insist upon the inclusion of this central services energy payment arrangement in a lease. Consequently, DOFA will seek to comply with this Energy Policy requirement where it is considered to be cost effective and generally in the Commonwealth's best interests. The pre-November 1997 CTL, which has not been revised to reflect the Energy Policy requirements, is still being used as a template for new leases.

- Some agencies are establishing systems and procedures to ensure the Energy Policy requirements are included in the negotiation process when their leases end.

7. Adherence to house energy use guidelines—new houses

Summary of policy statement: All agencies are to ensure all new houses they own or lease, meet Commonwealth energy use guidelines.

Findings

General: Agencies have not undertaken any significant action in response to this part of the Energy Policy. Systems and procedures are yet to be established, by agencies which procure residential housing, to ensure compliance with this requirement.

- Of the agencies examined during the audit, some agencies were intending to sell their residential housing, others were waiting for related systems and procedures to be developed by the EESU.
- Advice from DOFA indicates that, apart from the Defence Housing Authority's residential house leasing activities, there has been little Commonwealth agency activity (since April 1998) in procuring or leasing new houses. The activity that has occurred is in relation to existing owned or leased houses.

8. Adherence to housing energy use guidelines—existing houses

Summary of policy statement: All agencies, subject to the results of a sample survey to be carried out by the EESU, are to upgrade their owned or leased houses to meet the Commonwealth energy use guidelines.

Findings

General: Development of the systems and procedures for undertaking these assessments has been 'on hold' pending finalisation of moving the EESU.

- Generally, it was found that agencies were waiting for systems and procedures to be developed by the AGO's EESU. Examination of the AGO's EESU reveals that the EESU had pilot tested the systems and procedures to assess the energy rating of existing owned and leased residential houses and was negotiating with the agencies that use the greatest proportion of Commonwealth residential housing to undertake the required assessment.

9. Adherence to electrical appliance and equipment energy performance standards

Summary of policy statement: All agencies are to ensure all newly procured electrical appliances and equipment meet Commonwealth energy performance standards.

Findings

General: There is a high level of compliance with this requirement due to procurement systems and procedures developed as a result of previous Common Use Arrangement contracts (which required the supply of 'energy star compliant' appliances and equipment) rather than as a result of the Energy Policy requirement.

- Agencies were generally found to be complying with the energy star rating procurement requirement. However, promulgation of the Energy Policy

procurement requirements by agencies to their procurement cells was found to be inadequate.

- The evidence suggested this compliance was occurring mainly because this requirement was in line with DOFA's former procurement guidelines, circulars and common use contracts rather than the advice circulated by DPIE to CEOs in April 1998.
- One outstanding non-compliance area was found to be associated with agencies using computer software which did not have energy saving features.
- While compliant equipment was being procured, use of the energy saving features varied. Use of the stand-by facility available in most equipment, eg. photocopiers, printers and facsimiles, appeared to be limited, both during and after the working day.
- In the case of computers, most officers interviewed believed the activation of 'screen savers' constituted an efficiency measure. The ANAO notes, however, that for significant levels of efficiency to be achieved the various computer features of 'low power' and 'shut down', which place equipment in a 'sleep' mode, need to be enabled.

10. Adherence to vehicle fuel efficiency standards

Summary of policy statement: All agencies are to ensure all newly procured vehicles meet Commonwealth fuel efficiency standards from 2003.

Findings

General: The ANAO found that the AGO was still to finalise agreed vehicle energy use standards with industry and that, even if this had occurred, the implementation time extends for years making compliance by Commonwealth agencies impossible at present.

- The AGO has advised that it is developing a standard with the industry which will be incorporated into the vehicle industry's next investment cycle.
- Evidence suggests that some agencies are seeking to improve vehicle energy use efficiency through the day-to-day operations of the vehicles.
- The impression gained by the ANAO is that most agencies are generally interested in obtaining better motor vehicle efficiency but await a standard to be established by the AGO.
- Agencies are required to annually report passenger vehicle and other transport energy use to DISR for inclusion in the annual whole-of-government energy use report to Parliament. The report tabled in December 1998 drew attention to, among other things, the fact that the total annual passenger vehicle and other transport energy use for 1997–98 represented approximately 25 per cent of the total energy used by all agencies (excluding Defence operational energy use). DISR noted that: *This proportion is significantly higher than previous estimates, which were in the range of five to ten per cent, and suggest that addressing energy efficiency in transport may require a higher priority than previously assumed.*

11. Annual reporting to respective Ministers

Summary of policy statement: All agencies are to annually report their energy performance to their Ministers.

Findings

General: There has been some compliance with this requirement. Reports to date have been directly related to the energy use reports sent to DISR with some

additional explanation. Some portfolios have aggregated reports from their constituent agencies.

- The first reporting by agencies to their respective Ministers on their energy use was required at the end of 1998 for the 1997–98 financial year. Information obtained by the ANAO from selected agencies revealed that, less than half of these agencies have complied with this requirement. Of those agencies that did report to their Minister:
 - most reports were based around the energy use reports sent to DISR with some additional explanation;
 - some portfolios aggregated their agency reports from the various agencies within their respective portfolios; and
 - one agency reported energy use in their Annual Report in accordance with the former energy use reporting requirements.

12. Annual reporting to DISR

Summary of policy statement: All agencies are to annually report their energy consumption and intensity statistics to DISR which will prepare and provide annually for tabling in the Parliament a whole-of-government Energy Report.

Findings

General: The ANAO considers that there has been, for all practical purposes, full compliance with this requirement.

Summary of agency compliance

2.9 The results of DISR’s whole-of-government report of energy use in 1997–98 and the considerable interest and activity in improving energy efficiency that the ANAO observed in the Commonwealth agencies examined during the audit, gives cause for optimism. This impression does not, however, accord with the general finding that the level of compliance by agencies to the Energy Policy requirements was not significant; that is, only two of the 12 Energy Policy requirements had a high level of compliance. It should be noted, however, that the timing of receipt by agencies of the Energy Policy did not permit much time for compliance.

2.10 Further consideration of this issue, together with advice from DISR and more detailed case studies (see Appendix 6) indicate that, while agency compliance with the Energy Policy will facilitate achievement of the energy use targets, there are other energy efficiency activities which agencies can undertake which have the potential to result in achievement of the energy use targets. These activities involve day-to-day management of work practices and facilities, for example, the operation of lights, computers, photocopiers, airconditioners, hot water heaters and cleaning contractors. The ANAO considers that this observed activity includes both development of systems and procedures to comply with the Energy Policy, as well as day-to-day management of work practices and facilities.

The general difference between most of the compliance activities and day-to-day management activities is that the former deal predominantly with energy efficient design of buildings, houses, appliances, equipment and vehicles; the latter deal with the energy efficient operation of buildings.

2.11 In making this statement, the ANAO notes that the energy auditing requirement of the Energy Policy is a mechanism designed to focus on agencies' operations. Evidence gathered during the audit indicated that compliance with this requirement was not a prerequisite for implementing 'generic' energy efficiency initiatives where the latter had a high probability of resulting in greater energy efficiencies and savings.

DISR advised that:

We feel that undue emphasis may have been given in the report to the fact that the existing policy on Government operations does not explicitly mention requirements about day-to-day management of building facilities and operations ie "housekeeping" measures (Para. 2.10).

The explanation is that the policy was purposely non-prescriptive in this area on the understanding that these requirements would be included, as a matter of course, in any departmental energy management plan. Also the policy includes the mandatory requirement for energy audits, which routinely identify "housekeeping" opportunities, which CEOs are encouraged to exploit.

2.12 Given that:

- many of the Energy Policy requirements are mandatory;
- there are significant practical impediments, documented in Table 6, to agencies complying with many of the requirements of the Energy Policy; and
- agencies have approximately three and one half years until the energy use targets are required to be achieved;

the ANAO considers there is a risk that the momentum, developed to date, towards greater energy use efficiency could falter due to agencies focusing only on compliance with the mandatory Energy Policy requirements at the expense of other more cost efficient energy efficiency initiatives. Previous ANAO performance audits reported the loss of momentum in agencies' implementing pre-November 1997 energy policies.

2.13 The following recommendation is made, taking into consideration the primary objective of the Energy Policy to achieve the energy use targets by 2002–03, and the apparent effectiveness of day-to-day management activities which are in addition to compliance requirements.

Recommendation No.1

2.14 The ANAO recommends that agencies develop and implement a priority schedule of energy efficiency initiatives drawing on both the mandatory requirements of the Energy Policy and other non-compliance activities which involve day-to-day management of work practices and facilities.

AGO's response: agreed. AGO has always recognised that substantial efficiency gains can be made from effective “house keeping” measures and regards these as supportive of and implied in the Policy.

Attorney General's response: agreed.

CSIRO's response: agreed.

DOD's response: agreed. DOD is addressing this on a national basis through the Defence Energy Efficiency Improvement Project.

DHAC's response: agreed.

DISR's response: agreed. The energy policy is outcomes-oriented and deliberately non-prescriptive about the ways these outcomes can be achieved. The contribution that work practices and facilities management can make to energy efficiency improvements should be considered as a matter of course in agency energy management plans.

DOFA's response: agreed.

Environment Australia's response: agreed.

Treasury's response: agreed.

Veterans' Affairs response: agreed. The Department of Veterans' Affairs is already more than meeting the energy targets and has an energy plan in place. The Department only leases properties with control related solely to Tenant Light and Power. We have strategies in place to reduce electricity and vehicle energy usage. It is considered that these actions comply with this recommendation.

2.15 The ANAO suggests that, when agencies rank their energy efficiency priorities, the following be taken into consideration:

- timeliness. While the energy use targets are to be achieved in approximately three and one-half years, early action is preferable and reflects the required leadership;
- some of the mandatory requirements of the Energy Policy will take time to action given that systems and procedures remain to be developed by coordinating agencies; and
- the operation of work practices, facilities and equipment can generate significant and rapid savings. The Australian Taxation Office (ATO)

case study (see Appendix 6) illustrates that there are numerous ‘generic’ energy efficiency initiatives which have a high probability of resulting in significant and speedy energy and financial savings, without the need for detailed studies or substantial funding, and without having to formally comply with any mandatory requirements of the Energy Policy. The ATO advised that these relatively straightforward initiatives should be identified and pursued, because the more sophisticated energy efficiency solutions require time, funds, detailed examination and specialist expertise.

2.16 As detailed in Table 6, there are many options, alternatives and questions of applicability regarding several of the Energy Policy agency requirements. While the coordinating agencies are defining, revising and refining systems and procedures related to conducting energy audits, adherence to the energy use guidelines for commercial buildings and houses, assessment of houses and development of vehicle energy use standards, all CEOs have the responsibility of implement the requirements of the Energy Policy.

Recommendation No.2

2.17 The ANAO recommends that CEO instructions clearly indicate how agencies will comply with the Energy Policy, including the method of implementing energy audits, the BOMA Guidelines and new property leases.

AGO’s response: agreed.

Attorney General’s response: agreed. The Departmental Board of Management had already issued a comprehensive set of instructions, readily accessible to all on the Department’s Intranet, in the form of a Management Memorandum entitled “Conservation of Energy”. In addition, the relevant CEI’s are awaiting the Secretary’s approval.

CSIRO’s response: agreed.

DOD’s response: agreed in principle. DOD does not see why three specific inclusions have been singled out in this recommendation. It would be more appropriate just to require that CEO instructions clearly indicate how an agency will comply with the energy policy. Further, the level of detail suggested in para 2.18 seems inappropriate for a CEO instruction, and more appropriately belongs in related procedures for implementation.

DHAC’s response: agreed.

DISR’s response: agreed. It should be noted that there is an Australian standard for energy audits and documentation of procedures need not be extensive.

DOFA's response: agreed in principle. DOFA agrees that advice should be promulgated within agencies directing how the Energy Policy should be operationalised. The manner of promulgation (ie. through CEO Instructions or otherwise) is a matter which should be determined by individual agency heads.

Environment Australia's response: agreed. It is suggested that the recommendation would be clearer if the following words had been used *...that CEOs issue a directive that clearly indicates how the Agency will comply with its Energy Policy....*

Treasury's response: agreed.

Veterans' Affairs response: agreed. The Department of Veterans' Affairs currently complies with the Energy Policy for vehicles and leased properties. The areas responsible for running costs and setting up new leases refer to the policy and the mandatory requirements as and where needed. For example the new leases for the NSW State Office and the National Office Woden Tower lease comply with the BOMA guidelines. If required, future energy audits may be undertaken by specialist consultants. The extent of energy efficient initiatives within the Department's control is limited and a specific Chief Executive Instruction outlining an energy policy is regarded as not warranted for this Department. However, we will keep the recommendation under review.

2.18 The ANAO suggests that these instructions include:

- the schedule and types of energy audits to be undertaken;
- how, and the circumstances in which, the BOMA guidelines (or their replacement) will be implemented;
- how to maximise building energy efficiency in circumstances in which the BOMA guidelines (or their replacement) do not apply;
- the energy-related clauses that should be negotiated into leases;
- how the housing requirements of the Energy Policy will be implemented; and
- vehicle operation fuel efficiency initiatives.

2.19 There are practical difficulties in implementing some of the mandatory requirements of the Energy Policy related to the office building market place. If program imperatives require that an agency be located in a particular location and the building marketplace is a 'sellers' market, then compliance with the Energy Policy lease requirement of the BOMA Guidelines may be very difficult to negotiate with private sector building owners. In addition, strict compliance with the mandatory requirements of the Energy Policy may result in relocation costs which far outweigh

the resulting energy use savings and possibly total energy costs. Chapter 3 includes a recommendation to coordinating agencies to consider these issues in revisions to the formal requirements. DISR advised that: *the policy document provides for flexible implementation of the mandatory requirements.*

Agency annual reporting

2.20 Given that CEOs have been delegated responsibility for implementing the Energy Policy and that no agency had been given any regulatory role, the Energy Policy's annual CEO to Minister reporting requirement is the key accountability mechanism.

2.21 The ANAO notes that an energy reporting requirement for energy matters already exists in the PM&C Annual Reporting Guidelines. The specific reference to energy matters was revised in 1997–98 as a result of the Energy Policy announced by the Prime Minister on the 20 November 1997 and interpreted and distributed by the former DPIE in the April 1998 letter. The revision resulted in simply referring the reader to an officer in the former DPIE for more information. Given that the PM&C Annual Reporting Guidelines are undergoing further revision and noting that the Energy Policy annual CEO to Minister reporting requirement is the key Energy Policy accountability mechanism, the ANAO considers that the present reference in the PM&C Annual Reporting Guidelines should be enhanced.

Recommendation No.3

2.22 The ANAO recommends that CEOs incorporate in their Energy Policy annual report to their respective Ministers a statement that, among other things, either all the requirements of the Energy Policy were complied with or, where this did not occur, an indication of the areas of non-compliance and steps being taken to remedy the situation.

AGO's response: agreed.

Attorney General's response: agreed in principle; the annual report to the Minister is still to be approved by the Secretary.

CSIRO's response: agreed.

DOD's response: agreed in principle. DOD is concerned that a stated policy objective to simplify annual reporting on energy management performance may be counteracted by this requirement. Further, as the ANAO has noted in its findings, there are practical difficulties in complying with some of the requirements as they currently stand.

DHAC's response: agreed.

DISR's response: agreed.

DOFA's response: agreed in principle. If the intention is that CEOs annually report progress made in meeting the requirements of the Energy Policy then DOFA has no objection. However, given recent moves to streamline and better focus Annual Report content it is suggested this recommendation be taken up specifically with PM&C.

Environment Australia response: agreed.

Treasury's response: agreed.

Veterans' Affairs response: agreed. The Secretary of the Department of Veterans' Affairs included in his last annual report to the Minister the energy usage for the Department, and advice that it complied with the guidelines. This reporting will continue as outlined in the recommendation.

Recommendation No.4

2.23 The ANAO recommends that the Department of Industry Science and Resources and the Australian Greenhouse Office advise the Department of Prime Minister and Cabinet (PM&C) of the Energy Policy annual reporting requirements so they may be taken into account in the next review of PM&C's *Guidelines for the Preparation of Departmental Annual Reports*.

AGO's response: agreed. It is likely that Departmental Annual Reporting formats will be changed dramatically in the near future and that the Energy Policy report will fall outside that format.

DISR's response: agreed, subject to the decisions of the review of Annual Reporting requirements due to be conducted by PM&C from July 1999.

Procurement Guidelines

2.24 The ANAO suggests that DOFA revise the *Commonwealth Procurement Guidelines* to correct the section referring to building and construction policies where agencies are referred to a key document which does not exist. In implementing this suggestion, the ANAO suggests appropriate references be made to the Construction and Procurement Council as well as all other guides, and Australian standards.

Previous problems in program implementation

2.25 The ANAO has identified several impediments to achievement of the Energy Policy. The ANAO has also concluded that the impediments to agencies undertaking energy efficiency initiatives, which were identified in previous audit reports and energy management reviews (see Appendix 1), have been substantially removed. In particular:

- barriers to agencies retaining savings achieved through energy efficiency initiatives and the purchase of lower priced energy have been removed;
- there is increased agency awareness of agency building ownership/ lease arrangements; energy consumption and measurement and energy billing arrangements and the information available from this source. There remains, however, considerable scope for better use of the analytical capacity offered by modern billing arrangements;
- several officers, in different agencies examined, commented that their senior management was generally more aware of energy matters although many initiatives which have occurred appear to have been undertaken under devolved authority. Examples of energy efficiency projects and commitment of funds to energy efficiency projects were common;
- several agencies had building energy management systems in place or being planned. New building projects included such requirements in their planning documentation;
- comments from several agencies indicated that the frequency of sub-metering had improved, although it was still not widespread;
- while officers within some agencies commented on the lack of available and skilled personnel, most agencies examined demonstrated that they were 'getting on with the job'; and
- single energy accounts for multi-tenanted buildings were still common.

3. The role of coordinating agencies

Introduction

3.1 There are two Commonwealth agencies which have both a agency role and a coordinating agency role in implementing the Commonwealth's Energy Policy: DISR and the AGO. The administrative area of interest in DISR is the Resources and Energy Group. At the commencement of the audit this Group was located in the former DPIE. Following the October 1998 Federal Election, the Resources Division was relocated in the new DISR. Of special interest in the AGO is the EESU. The EESU was relocated to DISR from DOFA in December 1998 and the AGO assumed responsibility for the program in January 1999.

3.2 As mentioned earlier, the Energy Policy has seven coordinating agency requirements. These include one overall administrative responsibility which has been accepted by DISR and the AGO; the remainder involve policy review, reporting, development of standards and provision of advice. The ANAO examined progress against each requirement. Progress is summarised in Table 7 and more detailed information is provided later in this Chapter:

Table 7

Summary of ANAO findings in relation to coordinating agency compliance with the Energy Policy (see Table 3 for summary)

1. Overall administrative responsibility
Summary of policy statement: DISR and AGO are to assume overall administrative responsibility for the Energy Policy.
Findings <ul style="list-style-type: none">• Regarding policy interpretation, while the April 1998 letter was suitable for needs at that time, it now requires revision and refinement which will facilitate efficient and effective implementation of the Energy Policy by agencies. DISR advises that this revision has been undertaken.• Regarding policy promulgation, there was adequate but delayed promulgation of the policy to agencies. Delays were due to the time taken in finalising new administrative arrangements and are not expected to occur again.• Regarding coordination, systems and procedures have been initiated to coordinate energy activities, but they require finalisation; and• Regarding leadership, while systems and procedures for promulgating best practice to agencies are well established, systems and procedures for achieving maximum exposure of best practice and outstanding achievements to the private sector need development.

2. Conduct of reviews
Summary of policy statement: Periodic reviews of the program are to occur and an independent review is to be conducted after two years of operation.
Findings
<ul style="list-style-type: none"> • Systems and procedures remain to be established.
3. Whole-of-government energy use reporting
Summary of policy statement: DISR is to annually report whole-of-government energy use statistics to the Government.
Findings
<ul style="list-style-type: none"> • DISR has, for all practical purposes, fully complied with this requirement.
4. Revision of Commonwealth building energy use guidelines
Summary of policy statement: AGO is to review and update the energy use guidelines for Commonwealth-owned and leased non-residential buildings. This was originally DOFA's responsibility.
Findings
<ul style="list-style-type: none"> • To October 1998, DOFA's EESU had made adequate progress in developing the range of systems and procedures related to this requirement. However, further progress has been 'on hold' pending finalisation of the relocation of the EESU from DOFA. In addition, this requirement is linked to the private sector's progress in developing voluntary energy use guidelines. In February 1999, the AGO submitted a proposal to the Government to resolve this issue. In December 1998 the EESU formally moved to DISR, and in January 1999 the AGO formally assumed responsibility for the EESU program.
5. Revision of electrical appliance and equipment energy performance standards
Summary of policy statement: Industry will be consulted with a view to lifting this Commonwealth standard to the five-star level by 2000.
Findings
<ul style="list-style-type: none"> • There has been no activity in relation to this requirement. There is a link between this requirement and a similar program administered by the AGO which may be delaying progress.
6. Development of vehicle fuel efficiency standards
Summary of policy statement: The AGO is to develop Commonwealth vehicle fuel efficiency standards.
Findings
<ul style="list-style-type: none"> • The AGO is developing Commonwealth vehicle energy use standards. There is a 'lead time' extending several years before these will be implemented.
7. Establishment of an advisory service
Summary of policy statement: AGO will establish an advisory service to agencies, with 10 specified functions. This was originally DOFA's responsibility.
Findings
<ul style="list-style-type: none"> • To October 1998, DOFA had made progress in developing the range of systems and procedures related to this requirement. Further progress has been 'on hold' pending the finalisation of EESU's relocation from DOFA. This delay increases the risk that a number of the Energy Policy requirements will not be complied with in a timely fashion. In December 1998 the EESU formally moved to DISR, and in January 1999 the AGO formally assumed responsibility for the EESU program.

Overall administrative responsibility

Summary of policy statement: DISR and the AGO are to assume overall administrative responsibility for the Energy Policy.

3.3 This coordination role, undertaken by the former DPIE (now DISR) and the AGO (originally DOFA), was first stated in the April 1998 letter and is directly linked with:

- the former DPIE's submissions to Cabinet which formed the basis of the Energy Policy;
- DOFA's implementation of the Energy Policy's advisory service requirement through the EESU. In January 1999 the AGO assumed responsibility for the EESU; and
- the previous involvement of the then DPIE and DOFA in administering and implementing previous Energy Policies.

3.4 The phrase 'overall administrative responsibility' was not defined in the April 1998 letter. For the purposes of forming an opinion regarding compliance of DISR and (at the time) DOFA, the ANAO considered that DISR and DOFA (now the AGO) should:

- interpret the Energy Policy to facilitate implementation;
- promulgate the interpreted policy to agencies;
- coordinate the various 'coordinating agency' and other agency activities where appropriate; and
- lead the implementation of the Energy Policy by example.

3.5 The ANAO notes that the Government's decisions regarding the Energy Policy did not give any one agency regulatory responsibilities. This responsibility was given to each CEO.

Policy interpretation

3.6 The ANAO examined the April 1998 letter (regarded by the ANAO as the interpretation description of the Energy Policy) for consistency with Government decisions, completeness and clarity and found that:

- the document was generally consistent with Government decisions;
- one requirement identified in the Prime Minister's November 1997 Statement was not included in the April 1998 letter. This requirement was for utilisation of solar and other renewable energy technologies where relevant and cost effective. DISR advised that the oversight resulting in this omission will be remedied;

- some parts of the April 1998 letter may lead to implementation difficulties in some areas, ie:
 - all building space to be energy audited regularly and all cost effective recommendations implemented. The ANAO observes that the second part of this requirement could raise the risk that energy audits are not objective; and
 - the specialist energy advisory unit within DOFA (at the time of auditing) being identified as the regulatory authority for procurement of electrical equipment and appliances. DOFA did not agree with this requirement. DISR advised that the wording will be corrected;
- there are practical implementation issues, related to the realities of the commercial building market and the utility of the BOMA Guidelines, with several of the mandatory requirements (identified in Chapter 2) which the ANAO considers require formal recognition and possible reinterpretation;
- the document was incomplete regarding information about the role and activities of the EESU, the AGO and DISR. These include establishing minimum energy performance standards for new buildings, preparing and promulgating advice dealing with EPC, arrangements for conducting assessments of housing against National House Energy Rating Scheme (NatHERS) ratings and vehicle fuel consumption standards. As these activities and responsibilities have not been advised in one consolidated advice to agencies, there is some lack of visibility and clarity which could result in delays, duplication of effort and development of inconsistent systems and procedures by agencies;
- the document provides no information about the role and activities of the JWP. While DPIE did not mention the JWP in the April 1998 letter, its formation was announced at two DOFA/DPIE organised Energy Forums in May and September 1998. The JWP draft terms of reference (see Appendix 5) indicate that the JWP has a coordination role;
- some of the concepts and words used require some knowledge of property and energy management; eg. the use of the word ‘outgoings’. Many of these are not explained in the document;
- the covering letter states that the new Energy Policy includes mandatory as well as other requirements, but this division is not clear in the main text; and
- the document generally does not reflect the Government’s clearly stated requirement for agencies to show leadership by example. It could be argued that expeditious implementation of energy efficiency initiatives is de-emphasised by the lack of advice regarding the

implications of the 2002–03 due date for achieving the energy consumption targets. DISR advised that if responsibility for implementation is given to CEOs, then CEOs also have the responsibility to rank and program the work. Coordinating agencies can remind them, but should not have to write the programs for agencies generally.

3.7 The ANAO is aware of the time constraints that existed at the time the Energy Policy interpretation was developed and considers that, while the April 1998 letter was suitable for needs at that time, it now requires revision and refinement to facilitate the efficient and effective implementation of the Energy Policy by agencies generally.

Recommendation No.5

3.8 The ANAO recommends that DISR's and AGO's Energy Policy interpretation should:

- (a) include a glossary of energy terms;
- (b) clearly highlight the requirements that are mandatory and those that are not;
- (c) provide list of which agencies have particular responsibilities;
- (d) identify, for each requirement if applicable, which agency is developing related standards, systems and/or procedures;
- (e) provide an organisation chart or use some other suitable approach which clearly indicates the links between the agencies involved in the general administration of the Energy Policy;
- (f) indicate that action is required well before 2002–03 to achieve compliance with the Energy Policy and to realise the benefits of energy efficiency initiatives; and
- (g) take into account practical limitations to implementing mandatory requirements.

AGO's response: agreed.

DISR's response: agreed.

Policy promulgation to Commonwealth agencies

3.9 DISR and (at the time of the audit) DOFA (now the AGO) have an Energy Policy promulgation role. Examination of this activity revealed that promulgation of the Energy Policy to agencies was adequate regarding coverage, but not timely. Relevant factors include:

- administrative arrangements regarding the Prime Minister's 20 November 1997 statement not being finalised until March 1998. These arrangements concerned establishment of the AGO. Within a

month of these arrangements being decided, the former DPIE and DOFA had developed an interpretation of the Energy Policy and had distributed the document to secretaries of departments of state (with a request to forward the information to portfolio agencies) and other selected high energy using agencies. This was five months after the Prime Minister's 20 November 1997 statement; and

- analysis of which agencies should have received the Energy Policy and ANAO examination of selected agencies following distribution, revealed that distribution to energy using agencies was far from complete. The ANAO considered this was due to inadequate portfolio coordination/policy distribution systems and procedures within several departments of state. To overcome this problem, the former DPIE undertook an extensive series of mailings to agencies which were considered to have obligations under the Energy Policy. This resulted in some agencies first being informed about the Energy Policy 10 months after the Prime Minister's 20 November 1997 statement. While this left little time for these agencies to make the appropriate arrangements to collect and collate the required information to meet the first annual energy use reporting deadline, virtually all agencies met the deadline.

3.10 To overcome communication difficulties, DISR and DOFA undertook a number of commendable initiatives. These included establishing a telephone 'hotline', developing and using email address lists and organising energy management forums and coordination meetings (JWP) to which key stakeholders were invited.

3.11 DISR advised that, while it is the responsibility of individual agencies (not DISR) to decide whether they are subject to the Energy Policy and reporting obligations, DISR regularly reviews the list of agencies which it considers have obligations under the Energy Policy to:

- identify those agencies which should return an energy use report;
- identify those agencies whose energy use report will be included in another aggregated report of energy use; and
- create and maintain an accurate mailing list (postal and electronic) for Energy Policy related matters.

3.12 Portfolios generally include a variety of statutory and non statutory agencies as well as a department of state. When a Government decision is made which is considered to affect most Commonwealth departments and agencies, a coordination role exists at the department of state level to determine which agencies are affected and should therefore be advised of the decision. In the case of the Energy Policy,

which involved reporting energy use and therefore building occupancy, there is another coordination role to determine which agencies need to report separately.

3.13 ANAO's examination of several departments of state identified a variety of responses to the need for portfolio coordination and portfolio systems and procedures. While in many cases the coordination role exists in the corporate area of the departments examined, in other cases it was left to the branch which is responsible for the issue being considered (in this case energy use). The fact that in many cases the Energy Policy information had not been promulgated, both within the head office and to portfolio agencies by either the corporate area or a branch, suggested that, for some reason, portfolio coordination was often less than effective.

3.14 The ANAO suggests that CEOs of departments of state ensure systems and procedures are in place to communicate Government policy and decisions to relevant portfolio agencies in a timely fashion, and to provide the appropriate level of coordination between agencies to facilitate compliance.

Coordination

3.15 The ANAO considers there is a need for inter-agency coordination to reduce inefficiencies in implementing the Energy Policy. Specific coordination areas include:

- reducing unnecessary duplication in such areas as double reporting of energy use, contract and lease development and energy efficiency research and development;
- timing public announcements, by the Commonwealth, of energy efficiency initiatives and success in achieving greater energy efficiency and the lowering of greenhouse gas emissions;
- maximising returns on investment in procurement of goods and services such as electricity, office accommodation and specialist energy auditing services;
- reducing the possible negative aspects of competition between agencies in procurement activities. That is, because one agency's activities may negatively affect other agencies unnecessarily; for example, one agency which is prepared to pay more for a particular service (such as procuring electricity and related services) may set a high price for all agencies; and
- coordinating with AGO activities.

3.16 To facilitate inter-agency coordination the ANAO notes that:

- DISR and DOFA have established the energy forum and the JWP;

- DISR has taken steps to reduce energy use reporting duplication when preparing the annual whole-of-government report through using a specially- designed computer program; and
- EESU employs several specialists who are involved in facilitating the best value in procuring electricity and energy auditing.

Leadership

3.17 The Government expects Commonwealth agencies to lead the reduction of energy consumption and greenhouse gas emissions by example. The Prime Minister included this requirement in his November 1997 announcement. The 1998 National Greenhouse Strategy reinforced this expectation. The ANAO interprets 'leading by example' to mean all the measures incorporated in the Energy Policy must not only be implemented in a timely fashion but must be seen to be so implemented.

3.18 The ANAO found, during the audit, that several agencies had achieved significant reductions in energy use (see Appendix 6). While some of these achievements have been described in specialist energy management forums, it would appear that the Commonwealth has not maximised the exposure of these examples of good practice. The ANAO notes, however, that the EESU has developed a draft communication strategy which, among other things, addresses this deficiency.

Recommendation No.6

3.19 The ANAO recommends that DISR and AGO include, measures in their formal Energy Policy implementation plans which address the Government's requirement to 'lead by example'.

AGO's response: agreed.

DISR's response: agreed.

3.20 While the ANAO does not expect coordinating agencies to write implementation programs for agencies generally, it would expect that, in implementing the above recommendation:

- coordinating agencies develop a strategy for highlighting achievements in energy management and energy efficiency;
- coordinating agencies develop a strategy for identifying and promulgating best practice;
- the AGO finalise administrative and operational arrangements concerning the EESU;
- DISR and the AGO expeditiously complete development of energy auditing and related systems and procedures; and

- coordinating agencies encourage other agencies to become members of the Greenhouse Challenge. The Greenhouse Challenge Program is a Commonwealth Government initiative to encourage industries and organisations to seek continuous improvements in energy and process efficiency, to achieve maximum practicable greenhouse abatement performance, and, at the same time, to enhance their competitive advantage.

DISR advised in relation to this last dot point that:

We support the notion that individual agencies should join the Greenhouse Challenge, where they wish to do so. However, this course should not be presented as an equal and satisfactory alternative to implementing the existing mandatory policy, which in our view provides a comprehensive framework within which the required energy savings and greenhouse gas emissions reductions can be achieved.

Conduct of reviews

Summary of policy statement: Periodic reviews of the program are to occur and an independent review is to be conducted after two years of operation reporting to the Government.

3.21 Given that the Energy Policy is within its first year of implementation, the ANAO did not expect to see any reviews at this stage. The ANAO notes that the conduct of this audit is regarded by DISR and (at the time of the audit)DOFA as being a review for this purpose.

3.22 To implement this review component of the Energy Policy, the ANAO considers that DISR and AGO should:

- establish monitoring and review systems and procedures to:
 - improve the accuracy and utility of the energy use reporting systems and procedures;
 - review energy use targets;
 - identify areas of best practice; and
 - identify issues related to the Energy Policy; and
- develop systems and procedures for the independent review required by the Energy Policy in its second year of operation. Those systems and procedures could include developing the terms of reference, methodology, budget and form of funding. In implementing this recommendation the ANAO suggests the JWP be used to develop plans, systems and procedures for conducting these reviews.

3.23 DISR advised that it has included, in the JWP terms of reference, measures which address the Government's requirement to:

- conduct regular reviews of the Energy Policy; and
- implement an independent review of the Energy Policy within two years of the start of the policy.

Whole-of-government energy use reporting

Summary of policy statement: DISR is to annually report whole-of-government energy use statistics to the Government.

3.24 The ANAO considers that DISR has fully complied with this requirement. DISR published a whole-of-government energy use report in December 1998. The report includes documentation of all energy use statistics reported by the 118 agencies that had provided data to DISR on time, and analysis by various energy use categories and energy use targets. The report also included 'lessons learnt' information regarding agency reporting and information processing by DISR.

Revision of Commonwealth building energy use guidelines

Summary of policy statement: AGO is to review and update the energy use guidelines for Commonwealth-owned and leased non-residential buildings.

3.25 The Energy Policy specifically tasks the EESU with the function of: *reviewing and updating energy guidelines for Commonwealth-owned and leased non-residential buildings*. In addition, the Prime Minister announced, in his November 1997 statement, a \$4.4 million *Energy Performance Codes and Standards for Housing and Commercial Buildings Program* which is administered by the AGO. The objective of this program is to:

- expand NatHERS by including a minimum energy performance requirement for new housing and extensions to improve energy efficiency and reduce greenhouse gas emissions; and
- work with the States, Territories and key industry stakeholders to develop voluntary minimum energy performance standards for new and substantially refurbished commercial buildings on the basis of energy efficiency benchmarks.

3.26 The Government expected that the AGO's program would only be implemented: *if, after 12 months, the Government assesses that the voluntary*

approach is not achieving acceptable progress towards higher standards of energy efficiency for housing and commercial buildings. The AGO advised that:

- considerable progress is being made by the AGO in this area;*
- while it is true that there is some activity in the private sector in developing voluntary energy use guidelines, there are existing industry benchmarks that could be used;*
- the Prime Minister's original statement gave the industry one year (until November 1998) to bring proposals to the Government to address greenhouse emissions from the building sector;*
- in a letter (dated 10 February 1999), now with Ministers, a strategy encompassing both mandatory elements (as yet undefined) to be incorporated in the Building Code of Australia (BCA) and voluntary industry initiatives, including the development of a voluntary energy code, has been proposed by industry;*
- subject to the Ministers decision on the proposal, the fleshing out of the options will proceed. The voluntary energy code could be completed by mid-2000, while the mandatory elements will take up to five years before being fully incorporated in the building codes of all jurisdictions (via the BCA).*

3.27 At the time of the audit, the link between DOFA's EESU review responsibility and the AGO's program had not been formally defined. This task was the responsibility of the former DPIE and DOFA. DOFA advised that it would contribute to the AGO program and would, for the purposes of providing interim assistance to Commonwealth agencies, unilaterally develop a set of interim Commonwealth energy use guidelines. DOFA further advised that considerable resources had been used to develop such guidelines prior to November 1997, and that therefore the proposed interim guidelines could be based on the results of this work. The AGO further informed that:

It is certainly true that the linkage between DOFA's review responsibility and AGO's program have not been formally defined. The AGO program is designed to improve the energy efficiency of, and reduce greenhouse emissions from, Australia's built environment. The Commonwealth is a major consumer of the services of buildings, and the JWP could develop its own interim guidelines for recommendation to Commonwealth agencies. Members of the JWO from DISR (formerly DPIE and DOFA) participate as appropriate in the AGO processes (for example, on steering committees and providing technical advice).

3.28 DISR advised that:

Given that it will be several years before the AGO program is finalised, the EESU and AGO programs should not be closely linked.

3.29 Further examination by the ANAO revealed that the requirement to develop a set of Commonwealth building guidelines was not unique; for example:

- in 1990 and again in 1992 the Commonwealth Government had required development of building energy use guidelines. These requirements were not fulfilled;
- the ANAO recommended, in two Auditor General Reports (No. 10 of 1996–97 and No. 47 of 1996–97) that such guidelines be established; and
- by 1995 the former DPIE and Department of Administrative Services had developed draft guidelines but these were not finalised.

3.30 The ANAO's examination of EESU activities, functions and activities revealed there are several associated systems and procedures that are being developed as a package. These are:

- the above-mentioned development of interim Commonwealth energy use guidelines for commercial buildings. The EESU advised that it intends these guidelines to include technical standards for energy performance, best practice guidelines and associated training/awareness material;
- the development, trialing and ongoing management of methodology for pre-PWC certification of major construction proposals and establishment and management of a panel of accredited service providers. The work to date includes:
 - developing a PWC Certification working group comprising EESU staff and representatives of Commonwealth agencies involved in developing new works and major refurbishments, notably DOD and Overseas Property Operations Group;
 - holding discussions with the PWC Secretariat to determine the PWC's requirements; and
- the development of new energy auditing systems and procedures including the areas of post occupancy energy evaluations (POEEs) and EPCs (see Glossary). The work to date includes:
 - selecting a consultant to undertake development of a combined POEE and EA methodology and development of the project brief; and

- drafting the following EPC documents: EPC Guidelines for agencies; standard Request for Proposal for an EPC intended for agency use; standard Energy Performance Contracts between agencies and contractors; EPC Panel Briefing Package (for pre-qualified contractors); and Request for Pre-Qualification Expressions of Interest including consultants’ briefing package, selection criteria, and draft newspaper advertisement; and
- the development of pre-qualified panels of experts and firms which can be recommended to agencies to conduct EAs, POEEs, EPCs and works certifications.

3.31 DOFA advised that:

- a prerequisite for the energy use assessment methodologies (EAs, POEEs, EPCs and pre-certification), for the purposes of comparing buildings, is a set of standards to be achieved, that is the revised guidelines;
- the energy use training packages are dependent upon the way in which all of these systems and procedures are developed;
- those professionals who are eventually included on the intended pre-qualified panels are likely to be involved in developing the guidelines as well as the EA, POEE, EPC and pre-certification systems and procedures; and
- the POEE should be linked to the PWC systems and procedures to provide a means of verification related to PWC approvals.

3.32 Following assessment of the EESU progress, the ANAO is of the opinion that development of the systems and procedures identified above is well advanced. However, DOFA advised that further activity has been ‘on hold’ pending finalisation of EESU’s move from DOFA to DISR. The final section dealing with the EESU in this Chapter includes a recommendation on this matter (Recommendation No. 7).

Revision of electrical appliance and equipment energy performance standards

Summary of policy statement: Industry will be consulted with a view to lifting this Commonwealth standard to the five-star level by 2000.

3.33 The ANAO found that no activity has occurred regarding assessment of the four-star energy rating requirement with a view to moving to a five-star energy rating requirement by 2000. The ANAO also found that no Commonwealth agency had been assigned responsibility for this assessment.

3.34 The ANAO notes, however, that one of the programs identified in the Prime Minister's November 1997 statement was development of *Energy Performance Codes and Standards for Domestic Appliances and Industrial Equipment*; \$4.4 million was allocated to this program. This program was described as follows:

The measure will reduce greenhouse gas emissions by improving the energy efficiency of appliances and equipment. The programme enhances and extends existing energy efficiency programmes. It involves the development of minimum energy performance standards for new appliances and equipment, regulating or developing codes of practice to ensure their adoption and, where appropriate, labelling or rating appliances and equipment to help consumers in their selection.

3.35 The ANAO suggests that, in relation to its recommendation for revising the Energy Policy interpretation, that DISR and the AGO determine how agencies can comply with this particular requirement.

3.36 The AGO advised that:

- *there has been and continues to be considerable activity by the AGO in relation to the revision of codes and standards for appliances and equipment; and little activity in relation to the purchase, by Commonwealth agencies, of efficient appliances;*
- *the AGO role is concerned with mandatory requirements in states and territories for appliances to carry energy efficiency labels and/or meet minimum energy standards at the point of sale;*
- *it is the responsibility of the Joint Working Party on Energy Efficiency in Government Operations (JWP) to drive the policy agenda on the purchase of efficient appliances by government agencies. The AGO is represented on the JWP;*
- *it is not clear what consultation with industry is required. The choice faced by Commonwealth agencies when purchasing appliances is the same as that faced by any consumer—walk into a retail outlet and decide to pay a little more for five star products and use less energy and reduce operating costs. A more effective strategy would be for Commonwealth agencies to commit to this approach through the JWP and publicise the decision. Whatever approach is taken, the AGO can facilitate discussion with industry; and*
- *similarly, Commonwealth agencies could publicly commit to the purchase of Energy Star rated computer equipment. Again, the JWP would facilitate this approach. The National Appliance and Equipment Energy Efficiency Committee (which the AGO chairs) has committed funds to develop a national information program to promote Energy Star, and such material could be used by the JWP to promote the program in Commonwealth agencies.*

3.37 DISR advised that:

Given that the AGO's program is expected to take several years to finalise, the Energy Policy requirement should be implemented as soon as possible.

Development of vehicle fuel efficiency standards

Summary of policy statement: The AGO is to develop Commonwealth vehicle fuel efficiency standards.

3.38 The Energy Policy required that fuel consumption standards be established for the Commonwealth vehicle fleet. The AGO was to establish the standard.

3.39 The AGO has responsibility for three programs related to the transport sector with a budget of \$6.3 million as outlined in the Prime Minister's November 1997 statement. The relevant AGO program is titled *Environmental Strategy for the Automotive Industry*.

3.40 The AGO describes the Strategy and associated activities as follows:

Environmental Strategy for the Motor Vehicle Industry

In order to reduce the greenhouse gas emissions of the transport sector an Environmental Strategy for the Motor Vehicle Industry was announced in June 1997.

This strategy aims to significantly enhance the environmental performance of the automotive industry through a range of measures including:

- the negotiation of improved National Average Fuel Consumption (NAFC) targets for new vehicles for 2005 and 2010 (with an expectation of at least a 15 per cent improvement over 'business as usual' by 2010);*
- extension of the NAFC framework to include light commercial vehicles and 4WDs up to 3.5 tonnes;*
- continuation of the Fuel Consumption Guide and publication of fuel consumption data on the internet;*
- negotiations with individual car manufacturers on initiatives they might take to improve the fuel efficiency of the models they produce;*
- model-specific fuel efficiency labels for new motor vehicles;*
- fuel efficiency targets for the Commonwealth fleet from 2003;*
- development of partnerships with consumer groups (both private and fleet) to encourage attention to fuel efficiency;*
- a review of fuel quality in Australia, covering issues such as phasing out leaded fuel and introducing of higher octane fuel; and*

- *harmonisation with international vehicle emission standards by 2006, a measure more focused on air quality than greenhouse emissions.*

3.41 The AGO advised that:

In March 1999, the Australian Greenhouse Office will commission a study on options for establishing fuel efficiency targets for the Commonwealth fleet. Fuel efficiency targets need to be established on the basis of an informed understanding of the ability of domestic car manufacturers/assemblers to provide vehicles of a certain fuel efficiency. Information in this regard will become available to the AGO in late March 1999.

The proposed study is scheduled to conclude in June 1999 with a final Government decision on fuel efficiency targets for the Commonwealth fleet made in the latter half of 1999. This timing will allow sufficient time for domestic manufacturers to develop vehicles that meet this standard since most manufacturers are scheduled for a new model cycle from 2003. In addition, this timing also provides an early signal to leasing companies about the requirements for the next contract governing the Commonwealth fleet. The current tied contract (involving DASFLEET) expires on 31 August 2002.

In this context, it should be noted that the Government's policy under the Environmental Strategy for the Motor Vehicle Industry is to achieve a 15 per cent fuel improvement target over 'business as usual' for new passenger cars by 2010.

Establishment of an advisory service

Summary of policy statement: AGO will establish an advisory service to agencies, with 10 specified functions.

3.42 The EESU was established to undertake this 'advisory service' role. The Energy Policy specified 10 functions to be undertaken by the EESU. The ANAO examined the administrative systems and procedures of the EESU to determine if adequate progress had been made. Adequate progress has been made to October 1998. However, this work was at risk given that further work has been 'on hold' pending finalisation of the EESU move from DOFA to DISR.

3.43 The EESU activities affect many of the requirements of the Energy Policy and have therefore already been considered in numerous parts of this report. Consequently the results of the ANAO's examination of the EESU's activities against each of its 10 functions are summarised in Table 8.

Table 8
EESU Functions and Audit Results

Functions	ANAO opinion regarding progress in fulfilling the function
<p>1. Providing an energy procurement advisory service and representing Commonwealth interests in the deregulated energy market.</p> <p>2. Investigating opportunities for collaborative government energy procurement.</p> <p>3. Assisting departments/agencies in the assessment of financial and contractual risks in the evaluation of tenders for energy supply and developing risk management and minimisation strategies.</p>	<p>The EESU was found to be undertaking these functions. Examination of EESU activities reveals that it :</p> <ul style="list-style-type: none"> • arranged an electricity supply contract for 23 agencies (70 properties) in the ACT with ACTEW (July 1998). The estimated savings are \$18 million over three years. The resulting contract has been established in a way that permits other agencies to purchase their electricity under the same contract and price; • is regularly engaged in negotiations with energy suppliers; • is working with the DOD in attempting to use DOD's electricity buying power to assist other Commonwealth agencies purchase electricity; • is negotiating with the New South Wales and Victorian Governments to access their existing supply arrangements; • has held discussions with Queensland supply authorities about possible forward contract opportunities for the Commonwealth; • is developing a strategy to extend 'energy packaging' to Commonwealth operations in the Northern Territory, Tasmania and South Australia; and • is seeking to assist agencies secure additional services (better energy use data, EAs, POEEs and EPCs) from electricity suppliers. <p>In relation this function, DOD advised that it: <i>is continuing to work closely with the EESU on electricity procurement initiatives.</i></p>
<p>4. Developing best practice energy performance contract documentation and methodology.</p>	<p>The EESU has developed a comprehensive suite of EPC documents.</p>
<p>5. Establishing pre-qualified panels of energy service suppliers.</p>	<p>The EESU has taken appropriate steps to establish pre-qualified panels of energy service suppliers for EAs, POEEs, EPCs and for the pre-PWC energy standards certification procedure. The EESU advised that the EPC panel was established in mid-December 1998.</p>
<p>6. Assisting in the evaluation of energy performance contract tenders.</p>	<p>The EESU is establishing a pre-qualified panel of EPC companies and is now in a position to assist agencies evaluate EPC tenders.</p>
<p>7. Identifying suitable Commonwealth-owned premises for pilot projects in EPC and monitoring contract performance.</p>	<p>The EESU has identified suitable Commonwealth-owned premises for pilot projects in EPC and monitoring contract performance.</p>

Functions	ANAO opinion regarding progress in fulfilling the function
8. Reviewing and updating energy guidelines for Commonwealth-owned and leased non-residential buildings.	The EESU is, in conjunction with the EA, POEE and EPC projects, in a position to contract out development of energy management guidelines. In addition, the EESU is intending to develop an interim set of energy use standards to enhance the BOMA Guidelines. In relation to this function, DOD advised that it: <i>has been working closely with EESU in trying to establish standards which are more relevant than the BOMA guidelines.</i>
9. Reporting on energy aspects of proposed major construction projects.	The EESU has interpreted this function as developing a pre-PWC energy standard certification system and developing the POEE to provide information to the PWC regarding compliance with energy use standards. Examination of the EESU's activities regarding establishing an energy standard certification system and procedures for building construction and refurbishment applications for funding reveals that the EESU is at the project scoping stage, and that further activity has been 'on hold' pending finalisation of EESU's move from DOFA to DISR. This 'certification' requirement is linked with other Energy Policy requirements. The EESU has canvassed the following issues: <ul style="list-style-type: none"> • who should conduct the 12 monthly and five yearly energy audits/POEE's; • what are the ramifications for works which 'fail' the energy audits/POEE's; • what should happen to recommendations in energy audits/POEE reports. This includes factors to be taken into account regarding cost effectiveness; • building-specific energy use targets, building services management systems, efficient day-to-day operations; • PWC-EESU certification processes including establishing a panel of energy consultants; and • who should cover the cost of the above development work and at what point do agencies start paying for services rendered.
10. Developing training courses for Commonwealth officers.	The EESU is developing a training package in conjunction with the development of EA, POEE, EPC, pre-PWC certification and energy guideline systems and procedures.

Recommendation No.7

3.44 To minimise any further delays in progressing the above-mentioned 10 functions assigned by the Government to the EESU, the ANAO recommends the AGO finalise, as a matter of priority, the EESU's new administrative arrangements, work schedule and resourcing to ensure that the 10 EESU functions are achieved efficiently and effectively.

AGO's response: agreed. AGO is aware of the implications of past resourcing constraints in delaying delivery of methodologies and management tools that will assist agencies in fulfilling their commitments under the Energy Policy. The EESU projects mentioned in the Audit Report have now been activated and AGO is taking steps to resource the Unit's work appropriately.

A handwritten signature in black ink, appearing to read 'P.J. Barrett', is positioned to the right of the main text block.

Canberra ACT
15 June 1999

P.J. Barrett
Auditor-General

Appendices

Appendix 1

Pre-November 1997 energy policies and related issues

The provisions of the pre-November 1997 energy policies were formalised in 1990 resulting in a specific energy reporting component being incorporated in the Department of Prime Minister and Cabinet's *Guidelines for the Preparation of Departmental Annual Reports. The requirement to annually report*. The information these Guidelines require agencies to collect provides a summary of the pre-November 1997 energy policies between 1990–91 and 1996–97 and is documented in Table A. Many of the Energy Policy provisions have similar wording to the provisions of the Energy Policy.

Table A

The pre-November 1997 Prime Minister and Cabinet's *Guidelines for the Preparation of Departmental Annual Reports* energy use information acquisition requirement

The Government has decided that each department is to maintain information concerning the use of energy and measures taken to improve energy efficiency. The Minister for Resources has approved the following guidelines which should be addressed to give effect to the Government's requirements:

General:

- the main energy-consuming assets;
- the annual consumption of energy (eg. electricity, gas, oil) and asset (eg. buildings, transport, equipment);
- a summary of the organisation's energy management plan, including performance indicators;
- the achievements in relation to performance indicators (eg. energy, greenhouse gas and monetary savings);
- the initiatives planned for the next financial year including targets for savings;

Buildings:

- the use of energy efficient features in new building designs, building refurbishments and the manner in which energy efficiency considerations are addressed in privately-leased accommodation;
- the extent to which energy efficiency standards adopted by the Commonwealth are applied in the construction and refurbishment of Commonwealth-owned buildings;
- the nature of steps being taken to meet the Government's target of reducing energy use in Commonwealth-occupied buildings by 15 per cent within five years and 25 per cent within 10 years (1992–93 base year), and the extent to which these targets are being achieved;

Transport:

- Covering vehicle fleets and, where consumption of energy is significant, other forms of transport excluding specialised vehicles:
- the size, composition, usage and fuel consumption of the main transport modes, including separate reporting for passenger and commercial vehicles;

- reviews of vehicle user requirements and utilisation rates with a view to rationalising current fleets, including selection (purchase or long-term hire) of the more fuel-efficient vehicles;
- the type of lease arrangements (noting the extent to which fuel is included as part of the hire arrangement);
- implementation of driver education programs;

Equipment:

- purchase of appliances, where available, with not less than a four-star rating; and for equipment other than appliances where their consumption of energy is significant in terms of the overall use of energy, the use of opportunities to improve energy efficiency.

In 1993 the then Department of Primary Industries and Energy commissioned an Energy Study which examined energy management in the major energy using Commonwealth agencies. The findings of this study were generally reflected in the ANAO's Audit Report No 10 of 1996–1997, Follow-up Audit—*Energy Management of Commonwealth Buildings*, tabled October 1996. The report stated that:

- *agencies were unsure whether the buildings they occupied were owned or leased, or the terms relating to their energy bills;*
- *agencies were confused about energy consumption levels and produced data in kWh, MW, MJ and in other measures;*
- *almost half the agencies surveyed complained about being under-resourced to find information;*
- *agency energy managers complained about lack of management commitment to energy conservation;*
- *there was a lack of sub-metering and/or detailed energy use information in multi-tenanted office buildings;*
- *there was a lack of training in simple meter reading or basic energy matters;*
- *there was a lack of target figures or a benchmark for current properties to enable energy bills to be assessed;*
- *no departments of state and the large agencies interviewed during the study had a fully developed energy information system operating within their organisation. However, several had ready access to energy cost and sometimes consumption figures from their existing management information systems; and*
- *in multi-tenancy arrangements, buildings usually only had one energy account for the entire area occupied by the various departments and agencies. Energy costs were allocated to the tenants on an occupied area basis, irrespective of their actual energy use.*

As a consequence, the situation in 1993 was that:

- *agencies did not see the actual energy account, preventing them from analysing this data;*
- *the energy account finally received contained only cost data, and may have consisted of the combination of several tenancies; it may have included arrears or adjustments or may have included management and other charges rendering the data useless for the purposes of monitoring energy use; and*
- *the method of allocation of energy cost did not reflect the true cost of energy provided to the tenancy providing no incentive for improvement for individual tenants.*

Regarding the pre-November 1997 use targets DPIE advised that from adjusted/estimated energy use statistics, it calculated that a reduction of five per cent in energy use by Commonwealth agencies was achieved in the three years from 1992–93. Based on this figure it did not appear likely that, if all other things remained equal, the target of 15 per cent reduction over five years (from 1997–98) would be achieved. DPIE further advised that ‘all other things’ did not remain equal, the Commonwealth Public Service experienced significant change both in reduced total number of officers and in reduced property use and holdings. Due to these changes, rather than through greater energy efficiency, DPIE now estimates that the five year energy use target would be reached. In addition, DPIE advised that the energy use targets required revision in light of the implementation experience; the problem was that the energy use targets:

- were based on aggregate energy consumption, ie. all types of energy were included in total consumption figures with no account being taken of staff numbers or area/volume of space occupied;
- took no account of organisations which changed shape and size, ie. number of staff, area occupied;
- took no account of efficiencies achieved by agencies prior to the target being set. Therefore, those agencies which achieved some efficiencies before 1992–93 were disadvantaged; and
- required 1992–93 base data to be acquired, which many agencies failed to do. This was due to not having systems and procedures in place and, following 1992–93, some data was not collectable due to lost records and/or records not actually being taken. Therefore, base year figures had to be estimated.

Appendix 2

Statement by the Prime Minister of Australia The Hon John Howard MP: Safeguarding the Future: Australia's Response to Climate Change

20 November 1997

This document can be found on the internet at:
<http://www.dpmc.gov.au/green.html>

Appendix 3

The DPIE 15 April 1998 Letter—The Energy Policy

From: Secretary Department of Primary Industries and Energy

To: Secretary/Agency Head

IMPROVING ENERGY EFFICIENCY IN COMMONWEALTH OPERATIONS

In his 20 November 1997 announcement “Safeguarding the Future: Australia’s Response to Climate Change”, the Prime Minister set out a number of policies to reduce greenhouse gas emissions. Included in this package is a policy to reduce emissions from the Commonwealth Government’s own operations by adopting measures that will improve energy efficiency.

The purpose of this letter is to draw to your personal attention the key features of the policy and to provide details of contacts through which your staff can obtain further information and guidance.

The decision taken by Cabinet, which followed a process of wide consultation, requires Heads of Departments and Budget dependent Agencies to be accountable to their Ministers for improvements in energy performance. Commencing end-October 1998, Department and Agency Heads are to report annually to their Ministers on energy performance and from this data a whole of government performance report will be prepared and published.

Attached are details relating to the policy. Mandatory features include energy intensity targets for buildings, against which performance will be measured, and minimum energy performance standards for new and refurbished buildings, appliances and equipment. A number of measures are being developed, including vehicle fuel efficiency targets and energy performance contracting, which will help us to meet our objectives.

Responsibility for administering the overall policy resides with the Departments of Primary Industries and Energy and Finance and Administration, consulting with the Department of the Environment as appropriate. This Department and the Department of Finance and Administration will organise an energy management forum in the near future to assist Departments and agencies to become more familiar with the new measures. I would encourage you to nominate representatives to attend this forum. The names of your representatives should be advised to Mr Leyden Deer, Domestic Energy Branch, DPIE, telephone (02) 62723204; fax (02) 62731232; email leyden.deer@dpi.gov.au.

In the meantime, any queries your staff may have in regard to this policy could be directed to Mr Deer or Mr Ian Cronshaw, Assistant Secretary, Domestic Energy

Branch, DPIE, telephone (02) 6272 4593, fax (02) 6273 1232, email ian.cronshaw@dpi.gov.au.

This letter is being sent to all Departments and major energy consuming agencies, as set out in the attached schedule. I would appreciate your assistance in ensuring that the Government's requirements are circulated to all relevant agencies in your portfolio.

Yours sincerely

(Signed: K. H Matthews)

14 April 1998

Attachment

MEASURES FOR IMPROVING ENERGY EFFICIENCY IN COMMONWEALTH OPERATIONS

This document can be found on the internet at:

<http://www.affa.gov.au:80/resources.energy/energy/comops/comops.pdf>

Appendix 4

Extracts from the 1998 National Greenhouse Strategy relevant to the energy efficiency of Government operations

Additional measures for Commonwealth agencies advised in the 1998 National Greenhouse Strategy include:

Reducing greenhouse emissions from government operations

Governments will reduce greenhouse emissions from their operations by:

- 1. developing an inventory of greenhouse emissions;*
- 2. developing and implementing an action plan to reduce emissions;*
- 3. arranging for independent verification of performance under the action plan; and*
- 4. regularly monitoring and publicly reporting on performance.*

Integrated policy review and development

Governments will incorporate greenhouse issues in planning and decision making, including:

- 5. utilising, where feasible, a life cycle approach to decisions concerning development projects, particularly where the project is long term or involves high environmental risk;*
- 6. assessing the application of policy instruments for integrated decision making, including the cost effectiveness, feasibility and likely operation in practice of market-oriented mechanisms;*
- 7. adopting an integrated approach including greenhouse assessment in sectoral review activities; and*
- 8. improved analysis and modelling tools which consider economic, social and environmental impacts/outcomes.*

Environmental impact assessment

- 9. Governments will ensure that significant potential greenhouse gas emissions emitted from proposed projects are adequately addressed through their environmental impact assessment processes. This will include recognition of greenhouse as an environmental factor for this purpose.*

Appendix 5

Joint Working Party on Energy Efficiency in Commonwealth Government Operations: draft terms of reference

Joint Working Party (JWP) On Improving Energy Efficiency In Commonwealth Government Operations

(Draft Terms of Reference made available to the ANAO by DISR April 1999)

In his 20 November 1997 announcement *Safeguarding the Future: Australia's Response to Climate Change*, the Prime Minister set out a number of policies to reduce greenhouse gas emissions. Included in this package is a policy, *Improving Energy Efficiency in Commonwealth Operations*, for the Government to lead by example in reducing emissions from its own operations by adopting measures that will improve energy efficiency. Organisations covered by the policy are Commonwealth departments and substantially budget dependent agencies.

Mandatory features of the policy include energy intensity targets for buildings, against which performance will be measured, and minimum energy performance standards for new and refurbished buildings, appliances and equipment. A number of measures are being developed, including vehicle fuel efficiency targets and energy performance contracting. Under the policy, heads of departments and substantially budget dependent agencies are accountable to their Ministers for improvements in energy performance. *Measures for Improving Energy Efficiency in Commonwealth Operations* (<http://www.dpie.gov.au/resources.energy/energy/comops/index.html>) sets out the policy in more detail.

Responsibility for overall policy development rests with the Department of Industry, Science and Resources (ISR). Joint responsibility for the implementation of the policy is with ISR and the Energy and Environmental Services Unit (EESU) in the Australian Greenhouse Office (AGO).

Authority

The JWP was set up as a coordinating body for energy management in Commonwealth Operations in 1995. This body was recognised by Government in November 1997 and given an ongoing task to review the policy, *Improving Energy Efficiency in Commonwealth Operations*.

It was also envisaged that an external review of the policy would be commissioned after two years (April 2000) and recommendations brought to the Minister for Industry, Science and Resources as appropriate. The

first meeting of the re-formed JWP under the new arrangements was 29 May 1998.

Purpose

- facilitate the efficient and effective implementation of the policy, and *Improving Energy Efficiency in Government Operations*, through coordinating agency activity;
- identify issues and suggest to the Minister amendments to the policy and *Improving Energy Efficiency in Government Operations*; and
- promulgate the policy and best practice to stakeholder agencies through, for example, regular forums.

Functions

Consistent with the purpose statement, the JWP will:

- coordinate planning and program development;
- develop plans, systems and procedures for conducting regular reviews and evaluation of the program, including the two year review, to maintain currency and ensure that the main features are functioning effectively;
- ensure adequate and constructive communication is maintained between stakeholders;
- encourage departments and agencies to participate fully in the program;
- to oversee formulation and promotion of programs such as Energy Star and purchase of efficient appliances in Commonwealth agencies;
- identify opportunities for alternative approaches to improving energy efficiency; and
- communicate the role, functions and membership of the JWP to the stakeholders.

Recommendations and feedback will not be given by the JWP directly to departments and agencies, but will be communicated via the EESU and ISR according to their respective and separate areas of responsibility.

Outcome

To provide a broadly representative and responsive coordinating body to oversee implementation and review of the Government's policy on improving energy efficiency in its own operations, to evaluate developments and progress towards meeting the Government's energy objectives.

Membership

The core members of the JWP are the Departments of Industry, Science and Resources, Finance and Administration and Defence and the AGO. The Chair of the JWP will be rotated amongst the members.

Temporary membership of the JWP will also be offered to other major energy using departments and agencies on a rotating basis.

Timing of Meetings

Meetings of the JWP will be held every two months, unless subsequently varied by decision of the JWP.

Funding

No specific program funding has been provided for the JWP, however access to funds for essential projects recommended by the JWP may be facilitated through the allocation made to the EESU.

Duration

The JWP under the new arrangements came into existence with the first meeting on 29 May 1998. The functions of the JWP will be subject to periodic independent review to assess the extent to which JWP activities and output has responded to the purpose and outcomes given above. Subject to assessment, the members of the JWP anticipate it will continue as long as the stakeholders in departments and agencies consider it is fulfilling its objectives.

May 1999

Attachment: Functions Of Core Members Of The Joint Working Party On Improving Energy Efficiency In Commonwealth Government Operations.

Department of Industry, Science and Resources (ISR)

Responsibility for overall policy development rests with the Department of Industry, Science and Resources (ISR) with joint responsibility for the implementation of the policy residing with ISR and the Australian Greenhouse Office (AGO), particularly the Energy and Environmental Services Unit (EESU) which was explicitly established for this purpose.

ISR will be responsible for the following functions:

- Policy formulation, dissemination of information and advice through

documents such as *Measures for Improving Energy Efficiency in Commonwealth Operations*.

- Collect, aggregate, summarise and analyse energy consumption data obtained from departments and agencies covered by the policy:
 - prepare a whole-of-government energy performance report annually – by December each year;
 - keep reporting system under regular review with the aim of improving its scope and usefulness.
- Commission the two yearly independent review of program:
 - submit the review report to Government;
 - review and revise program measures and performance targets as necessary.
- Participate in Joint Working Party.

Australian Greenhouse Office

The AGO has joint responsibility, with ISR for the implementation of the government policy in addition to a number of general greenhouse-related policies and programs which are complementary to government-specific policies and programs. The AGO will ensure that the application of greenhouse initiatives is consistent between government and non-government sectors.

Implementation of the Government Policy

A specialist Energy and Environment Services Unit (EESU) has been established in the Australian Greenhouse Office (AGO) with responsibility for the following functions:

- provide an energy procurement advisory service and represent Commonwealth interests in the deregulated energy market;
- investigate opportunities for collaborative government energy procurement;
- assist departments/agencies in the assessment of financial and contractual risks in the evaluation of tenders for energy supply and develop risk management and minimisation strategies;
- develop best practice energy performance contract documentation and methodology;
- establish pre-qualified panels of energy service suppliers;
- assist in the evaluation of energy performance contract tenders;
- identify suitable Commonwealth-owned premises for pilot projects in energy performance contracting and monitoring contract performance;

- review and update energy guidelines for Commonwealth-owned and leased non-residential buildings;
- conduct sample stocktake of existing Commonwealth housing to assess potential to upgrade to NatHERS 3 star or better;
- report on energy aspects of proposed major construction project;
- develop energy management training courses for Commonwealth officers;
- organise Energy Managers Forums; and
- participate in Joint Working Party.

Energy efficiency in buildings, appliances and transport

In addition, the AGO has responsibility for the development and application of codes and standards for transport, building and appliance energy efficiency:

- energy performance standards, rating and labelling for new appliances and equipment;
- energy efficiency standards for residential and commercial buildings;
- identification of types, extent and patterns of energy use within specific sectors;
- fuel efficiency labelling and fuel efficiency improvements.

Department of Defence

The Department of Defence is a member of the Joint Working Party by virtue of being the largest energy consuming agency in the Commonwealth, with major property holdings and direct responsibility for many major construction and refurbishment projects. Also responsible, through the Defence Housing Authority, for procurement and leasing of Defence housing.

Department of Finance and Administration

The Department of Finance and Administration is a member of the Joint Working Party because of its key financial advising and administrative role and by virtue of its prime responsibility for the Commonwealth-owned property portfolio and the management and operation of leased buildings.

Appendix 6

Case studies

Introduction

1. The ANAO selected three examples of energy efficiency successes. These are, the management of Parliament House, the Australian Tax Office and a recently privatised business unit of the former Department of Administrative Services.
2. The claims and statistics quoted in the case studies have been provided by the agencies involved. The ANAO has not verified the statistics.

Energy Management in Parliament House

(Note: the following is based on material obtained from the JHD which was later amended and added to by the JHD Engineer in conjunction with the ANAO. The material has not been verified by the ANAO.)

Background

3. While Parliament House is a major facility with an integral engineering and property management support structure, it nevertheless provides an example of the achievements which can be reached by a concerted approach to energy management. It provides a case study of the scale of savings which can be achieved by a focused approach to energy management. The actions which have been taken are not necessarily limited to large, owned buildings and may be applied in a variety of circumstances.
4. With a covered floor area of 250 000 m² and 4500 rooms on four levels, Parliament House is one of the largest and most complex buildings in the southern hemisphere. A structured energy efficiency program has existed since occupation in 1988.
5. Energy Management is a central element of the Joint House Department (JHD) Environmental Management Plan. This plan addresses the government's energy management program and the national greenhouse response strategy. An integrated Building Management System (BMS) exists.
6. Recent energy management initiatives include:
 - publication of an Energy Management Plan;
 - production of efficiency awareness video and brochure;

- commitment to the Greenhouse Challenge Program;
- staff awareness campaign; and
- on-going major efficiency initiatives.

Achievements

7. JHD advised that significant financial, economic and environmental achievements since 1988–89 include:

- energy consumption reductions exceeding 53 per cent (reduced by 25.3 per cent in the four years since 1992–93) and planned to exceed 60 per cent;
- greenhouse gas emissions reduced by 41.2 per cent per square meter of building serviced (635 tonnes in 1996–97 and 20 970 tonnes since 1988–89). The 2005 interim greenhouse gas emission target has been met;
- for the 1996–97 financial year annual recurrent savings of over \$2.5 million from consumption reductions compared to 1988–89 derived from:
 - electricity consumption decrease of 38.15 per cent per square meter;
 - gas consumption decreased by 66 per cent per square meter;
- a commitment to further energy consumption reductions of 1.5 per cent per year for the next six years; and
- actual energy consumption is six per cent below the 1994 Property Council of Australia reasonable target for commercial office buildings.

8. These achievements have been benchmarked to best practice and have been audited against cost and consumption records maintained since 1988. Benchmarking is supported by a rolling Total Asset Management Strategy. The focus of the energy audit program has been to set targets, help identify and select priority projects and to independently benchmark actual performance.

9. The JHD advised results were achieved by:

- progressive implementation of intelligent building management systems;
- effective integration of these systems;
- introducing a Planned Preventative Maintenance Program (PPMP) (largely-time based but utilising some condition-based techniques in particular infra-red, vibration and oil analysis);
- re-commissioning the building;
- setting performance targets and goals for staff and contractors;
- developing the required skill base in both staff and contractors; and
- designing out high consumption or maintenance cost items.

10. Major projects undertaken include:

- airconditioning:
 - refinement of the airconditioning control system, allowing enthalpy control use of outside air in controlling the building temperature and humidity;
 - enhancement of the air-conditioning temperature and humidity control to give greater stability in operation;
 - installation of more efficient air-conditioning and lighting time blocks;
 - Liquid Pressure Amplification (LPA) (installation of a liquid line pump which eliminates flash gas to the refrigerant control, creating a six per cent improvement in chiller capacity); and
 - de-scaling the cooling coils in air handling units to give a better heat transfer to the air stream;
- refinements to the boiler operation program and reduction of total boiler capacity by 1.5 mw;
- installation of more efficient lighting lamps;
- lowering hot water and raising cold water temperatures significantly;
- installation of carbon monoxide monitors to the car parks enabling the cycling of exhaust fans when carbon monoxide levels rise and fall;
- installation of proven energy efficient variable speed drives to car park exhaust fan motors to complement carbon monoxide monitoring;
- conversion of 54 air handlers to variable speed drives and removal of inlet guide vanes; and
- conversion of the first 110 (of 1880) variable air volume systems to electronic controllers enabling individual space control.

11. Energy efficient practices followed included:

- Equipment selection:
 - white-goods have a minimum five-star energy rating;
 - photocopiers and printers have standby modes;
 - small IT systems assessed on efficiency and have a standby mode; and
 - energy efficiency considered when selecting energy consuming equipment.
- Best practice:
 - benchmarking against Property Council of Australia targets, other major Australian building complexes and international best practice;
 - technological developments continually monitored and introduced as appropriate;

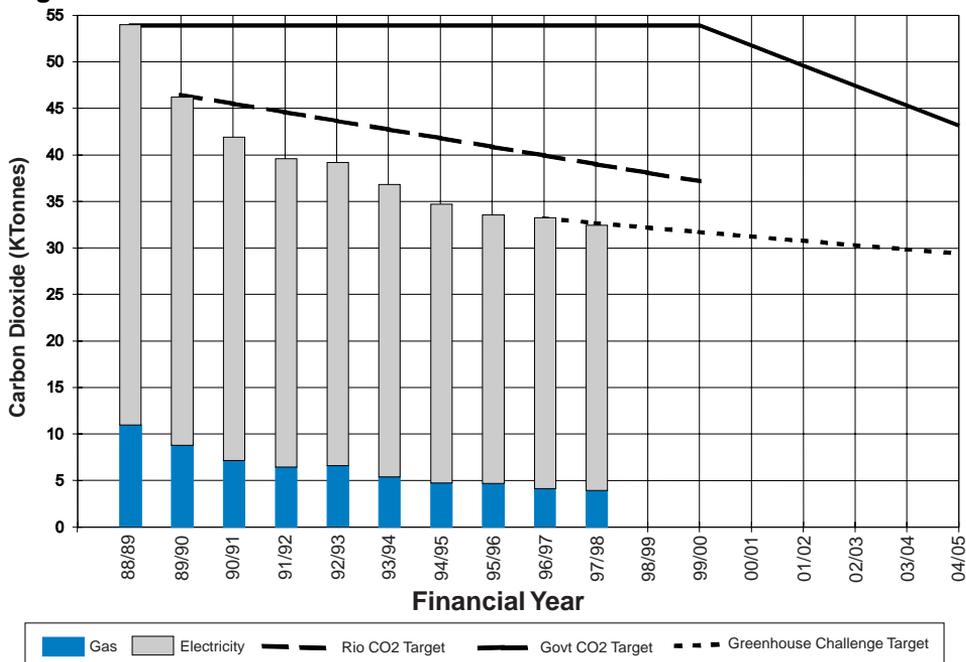
- building envelope and services are maintained by continuous progressive upgrading to avoid degradation of efficiency over time; and
- energy efficiency is a prime consideration when evaluating upgrade strategies.
- Vehicle fleet:
 - the JHD vehicle fleet has been reduced by 39 per cent since 1992–93. The average size and power of the fleet was also reduced; and
 - basement and loading dock vehicles (with the exception of one gas powered forklift) are powered by battery for maximum efficiency and minimum air pollution.

JHD general advice

12. Short term occupants of unsophisticated facilities may well find that a basic 'housekeeping' program is all that can be justified. As a minimum, such a program should include measures which ensure that lights, equipment, and HVAC are turned off when not required. It has been assessed that these measures alone can readily produce savings in consumption of up to 20 per cent with minimal expenditure, irrespective of the size of the property involved.

Appendix 6

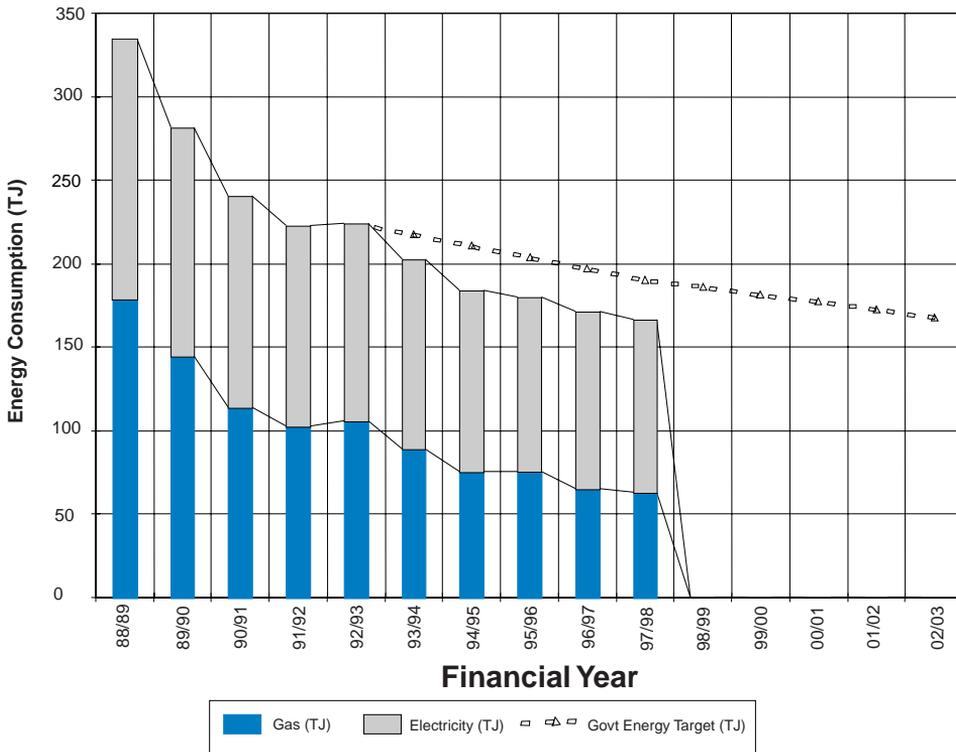
Diagram 1: Parliament House—Carbon Dioxide Emissions



Rio Target, 20% reduction in Carbon Dioxide emissions from 1990 level by 2000.
 Government Target, Stabilised at 1988 level until 2000. 20% reduction in carbon dioxide from 1988 levels by 2000.
 Greenhouse Challenge 1.5% reduction per year.

Appendix 6

Diagram 2: Parliament House—Total Energy Consumption



Energy Management in the Australian Taxation Office

(Note: the following is based on material obtained from an ATO presentation at an Energy Forum which was later amended and added to by the Energy Manager of the ATO in conjunction with the ANAO. The material has not been verified by the ANAO)

Introduction

13. The ATO is an example of what can be achieved from a fundamental approach to energy efficiency which does not necessarily rely on technical solutions. The approach and management techniques employed are readily transferable to other agencies.

14. The ATO occupies 26 properties Australia wide. Energy efficiency in design and fit-out is varied, ranging from energy efficient new buildings with sophisticated Building Management Systems to some older and inefficient designs. Energy-related criteria exist for any new leases, refitting etc. While initiatives have resulted in energy savings, the focus has been on savings in operating costs. Where available, advantage has been taken of cost savings from electricity market deregulation.

Background

15. The initiatives have emphasised staff participation and support. With management support an energy management network has been established. While the network parallels the regional structure and facilities management sections within the ATO, its planning and day-to-day activities are coordinated by the Adelaide Office.

16. A hands-on approach exists which has addressed numerous minor projects on an whole-of-agency basis at minimal cost and minor variations to work practices. An energy action plan has established priorities and is updated in a consultative manner from time-to-time. Where appropriate and a good business case existed there have been some significant projects requiring central funding.

Achievements

17. A feature of the ATO achievements is the success of the control and coordination structure used. This is based on a framework of voluntary appointments in an ATO ECONet. Significantly, activity coordination has been delegated from the National Office level to the ATO ECONet structure. By wide consultation a series of projects has been established. Mostly non-technical in nature these have extended beyond technical solutions.

18. The initiatives have survived significant restructuring and downsizing in the ATO and are continuing. While there has been a concurrent decrease in staff levels and square metres of office space occupied (each of about 10 per cent) which have affected overall energy consumption, it is evident the measures taken have resulted in significantly greater reductions. The savings stand independent from those resulting from market deregulation.

19. The ATO believes it has now reached a point where 'simple' initiatives have been completed and is actively addressing EPC with a view to addressing more technical areas. Priority is being given to sites which are less efficient than others; the comprehensive recording and reporting system which has been established is a useful decision-making tool for this purpose.

20. Overall results can be attributed to optimising the use of modern energy saving technology, a climate of improved staff awareness of energy (and environmental) matters, combined with simple and effective measures such as:

- switching off computer monitors, photocopiers and other office equipment when not in use;

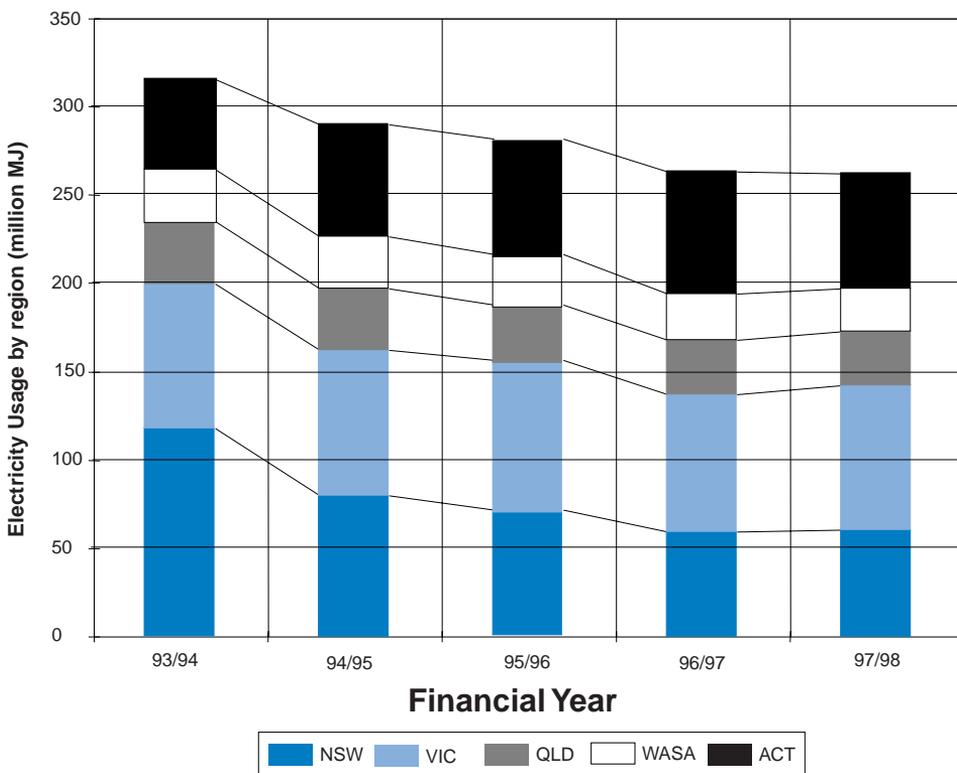
- providing the means to switch off or dim lighting in unused areas, eg. movement detectors and de-lamping;
- modifying core building operating hours by reducing hours of building operation, eg. cleaning contracts operate closer to core building times and with lighting restrictions in place, work area lighting is initiated by staff at work commencement rather than by time-clock;
- modifying or providing supplementary airconditioning for more economical operation and adjusting hours of operation;
- operating car park lighting and ventilation on a demand basis;
- providing the means to switch off boiling water units and drinking units after hours; and
- frequent users of vehicles have undertaken driver education.

Conclusion

21. The ATO experience suggests that significant operating cost reductions can be achieved without necessarily incurring major expenditure. The value of an whole-of-agency approach to projects is identified, as is the need for management commitment and staff participation.

Appendix 6

Diagram 3: ATO Electricity Usage By Region and Financial Year



Small Leased Professional Office

Introduction

22. The ANAO examined the energy management practices of a privatised energy management consultancy. This company established its own energy management project to achieve a healthier bottom-line and to demonstrate what should be standard practice in lease planning.

23. An energy efficiency checklist which addressed the major energy consuming components of the office (lighting, office power, airconditioning systems and hot water) was developed. A key focus was to minimise out-of-hours energy requirements.

Measures taken

24. The company undertook the following measures:

- **Lighting.** Existing lighting types were retained (retrofitted where necessary), lighting was zoned and day-lighting was maximised:
 - older style fluorescent tubes were replaced with tri-phosphor tubes, starters were replaced where necessary and diffuser lenses cleaned; and
 - the higher quality of lighting achieved allowed significant de-lamping resulting in an immediate saving of 40 per cent of lighting energy. Some areas previously below lighting levels specified in standards improved dramatically—the investment was justified on this basis alone.
- **Office equipment.** Energy efficient equipment and procedures are used.
- **Other.** Hot water heating requirements were minimised. Airconditioning settings were checked.
- **Staff awareness program.** The program delegates responsibilities for specific energy management actions.
- **Control and Feedback.** A simple monitoring program, based on meter readings, is used to track energy performance.

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