The Auditor-General
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Performance Audit

The Administration of Major Programs

Australian Greenhouse Office

Australian National Audit Office

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Australian National
Audit Office

Canberra ACT
5 March 2004

Dear Mr President
Dear Mr Speaker

The Australian National Audit Office has undertaken a performance audit in the Australian Greenhouse Office in accordance with the authority contained in the *Auditor-General Act 1997*. Pursuant to Senate Standing Order 166 relating to the presentation of documents when the Senate is not sitting, I present the report of this audit and the accompanying brochure to the Parliament. The report is titled *The Administration of Major Programs.*

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

AUDITING FOR AUSTRALIA

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

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Abbreviations/Glossary

ABARE	Australian Bureau of Agricultural and Resource Economics
Acquittal	Evidence provided by recipients to demonstrate grant funds have been expended in accordance with the terms and conditions of the funding agreement.[1]
AFCP	Alternative Fuels Conversion Program—a grant program funded through MBE to reduce greenhouse gas emissions and significantly improve urban air quality by facilitating heavier commercial road vehicle and public transport buses to operate on CNG or LPG fuels.
AGO	Australian Greenhouse Office
ANAO	Australian National Audit Office
Appropriation (Supplementary Measures) Act No.2 1999	The Act to appropriate funds for the MBE package of measures.
BAU	business as usual—a baseline scenario that examines the consequences of continuing current trends in population, economy, technology and human behaviour.
CO_2	carbon dioxide—a greenhouse gas that contributes to global warming
CO_2-e	carbon dioxide equivalent—a common unit to measure the global warming potential of different greenhouse gases. For example, Co2 has a global warming potential of 1 compared to methane (CH_4) that has a global warming potential of 21.
Challenge	Greenhouse Challenge Program—a voluntary industry program to reduce greenhouse gas emissions, drive continuous improvement and enhance knowledge and understanding of cost effective ways of managing greenhouse gas emissions.
CNG	compressed natural gas

[1] Australian National Audit Office, *Administration of Grants—Better Practice Guide*, ANAO, Canberra, May 2002, p.1.

CSIRO	Commonwealth Scientific and Industrial Research Organisation
Ethanol	A clear flammable hydrocarbon, usually produced from the fermentation and distillation of renewable biomass feedstock such as sugar.
funding agreement	A legally enforceable agreement setting out the terms and conditions governing grant funding. These terms and conditions are set by the funding organisations, and must be agreed by both parties.
GGAP	Greenhouse Gas Abatement Program—a grant program funded through MBE to support activities likely to result in substantial emissions reductions or substantial sink enhancement, particularly in the first Kyoto commitment period 2008–2012.
Grant	A sum of money given to organisations or individuals for a specified purpose directed at achieving goals and objectives consistent with government policy.
Grantslink	A whole-of-government website with direct links to existing information on Australian Government programs. It is accessible at *www.grantslink.gov.au*
greenhouse effect	The rise in temperatures on earth as a result of certain gases in the atmosphere trapping energy from the sun. These gases can include, but are not limited to, carbon dioxide, nitrous oxide and methane.
GST	Goods and services tax
HFC	hydrofluorocarbons—synthetic greenhouse gases that are used in the refrigeration and air conditioning industries as a replacement for more significant ozone depleting substances.
IPCC	Intergovernmental Panel on Climate Change—The IPCC was established by the World Meteorological Organisation and the United Nations Environment Program to assess scientific, technical and socio-economic information relevant for the understanding of climate change.

ISO 14001	Standard that specifies the actual requirements for an environmental management system, which forms part of the ISO 14000 series of international standards of environmental management systems.
Kyoto Protocol (Kyoto)	Sets out the legally binding greenhouse gas emission targets and reporting requirements for developed countries in the first Kyoto commitment period 2008–2012.
LPG	liquefied petroleum gas
MBE	Measures for Better Environment, 1999 Package
milestone report	Report provided by recipients detailing performance information on the achievement of project aims and objectives throughout the life, and at termination of the project.
MIS	management information system
Monitoring	Process by which the funding organisation establishes whether individual grants are expended in accordance with the terms and conditions of the funding agreement.
MOU	Memorandum of Understanding
Mt	mega tonnes (the equivalent of one million tonnes)
MRET	Mandatory Renewable Energy Target
needs assessment	Involves a qualitative and quantitative assessment of the nature and extent of the need for the program including identification of priority groups, projects or funding areas for the program and identification of the most appropriate and cost-effective administrative structure for delivering the program.
NGGI	National Greenhouse Gas Inventory
NGS	National Greenhouse Strategy
OECD	Organisation for Economic Co-operation and Development

PVRP	Photovoltaic Rebate Program—a rebate grant program funded through MBE to encourage the long-term use of photovoltaic technology, increase renewable energy in Australia, reduce greenhouse gas emissions, assist in the development of the photovoltaic industry and increase public awareness of renewable energy.
quasi-entitlement	A program where there is the expectation of success when the eligibility criteria is met by applicants.
REAA	Renewable Energy Action Agenda–The REAA is a joint industry/government initiative that sets out a strategic policy framework which aims to achieve a sustainable and internationally competitive renewable energy industry with annual sales of $4 billion by 2010.
RECP	Renewable Energy Commercialisation Program—a grant program funded through STF and MBE to support innovative renewable energy equipment, technologies, systems or processes that have strong commercial application and the prospect of significant abatement of greenhouse gas emissions over the longer term
REEF	Renewable Energy Equity Fund—an investment program funded through STF to encourage the commercialisation of research and development in renewable energy technologies by addressing capital and management constraints.
RRPGP	Renewable Remote Power Generation Program—a grant program funded through MBE to increase the uptake of renewable energy technologies in remote areas, assist in developing the renewable energy industry, help meet the energy needs of indigenous communities and lead to long-term greenhouse gas reductions.
risk management	The systematic application of management policies, procedures and practices to the tasks of identifying, analysing, assessing, treating and monitoring risk.
STF	Safeguarding the Future, 1997 Package

Summary and Recommendations

Executive Summary

Background

1. Climate change, caused by the emission of greenhouse gases, is recognised as a major issue with the potential to cause significant damage to the national and global economy and to seriously affect human welfare and the integrity of natural ecosystems.[2] In 1997, and subsequently in 1999, the Australian Government introduced two major spending packages with a total value of almost $1 billion. These packages were designed to address the challenges posed by the issue of climate change and to meet Australia's domestic and international climate change commitments. The Australian Government has agreed to 'develop and invest in domestic programs to meet the target of limiting greenhouse gas emissions to 108 per cent of 1990 emissions over the period of 2008–2012'.[3]

2. Since its inception in 1998, the Australian Greenhouse Office (AGO) has been responsible for the implementation of these two major packages. The agency's mission is to lead Australia's greenhouse action to achieve effective and sustainable results. The AGO seeks, amongst other things, to facilitate projects that maximise cost effective greenhouse gas abatement and reduce growth in greenhouse gas emissions.

3. The AGO has been subject to several inquiries and reviews since its inception that focused on policy and administrative issues. The objective of the Australian National Audit Office (ANAO) audit was to examine and report on the administrative efficiency and effectiveness of significant programs administered through the AGO. The audit examined seven material programs across both the 1997 and 1999 packages, which accounted for 87 per cent of total program cost estimates.

Key findings

Planning for results (Chapter 2)

4. Planning is the cornerstone of an economic, efficient, and effective program and is vital to provide a degree of assurance that programs will achieve their objectives.

5. The ANAO recognises that there are significant technical challenges in implementing programs designed to address greenhouse gas abatement and/or support renewable energy technologies. It is a complex area with a

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2 Australian Greenhouse Office, *Corporate Plan 1999—2001*, AGO, Canberra, 1999, p.10.

3 The Hon. J Howard MP, Prime Minister, *Media Release: 'Strategic Leadership for Australia'*, November 2002, p.41.

high degree of uncertainty as to whether a new technology or approach will achieve expected results.

6. The 1997 package was developed to reduce Australia's net emission growth to assist in meeting international commitments. The 1999 package was largely conceived within the context of negotiations about offsetting the impacts of the new tax system on the environment. The 1999 package was developed within a short timeframe with little input from the AGO prior to the announcement of the program. The absence of a comprehensive risk assessment early in the life of the programs had particular downstream outcomes for two of the seven programs examined. The potential demand for one program valued at $31 million did not align with initial expectations. Another program, valued at $75 million involved substantial residual risks to the achievement of its objectives.

7. For all of the seven programs considered by the ANAO, objectives and performance measures have been established. However, the objectives have tended to be broad with few measurable targets making it difficult to capture and meaningfully report on key program results. Performance measures improved following a review in 2000. The accuracy of reported results has also been enhanced through verification work by the AGO. Nevertheless, in relation to one program, further refinement is needed to provide an assurance that reporting of greenhouse gas abatement is beyond business as usual (BAU).

8. Program guidelines and applications have been improved since their inception. As well, programs have been subject to subsequent risk assessment. The ANAO considers that the key lesson learned for any future funding assistance programs is that priority must be given to comprehensive risk assessment and management controls at the outset of the development process. If this is not achievable in practice, then certainly as early as possible and before the commitment of any substantial resources.

Appraisal and selection (Chapter 3)

9. When appraising and selecting project applications, an essential criterion is that assistance provided by the Australian Government will add value by achieving something worthwhile that would not occur without grant assistance. The ANAO considers that adequate documentation is important particularly in providing transparency to support reasons for decisions.

10. The ANAO found that generally rigorous appraisal mechanisms have been adopted by the AGO. Appraisal is guided by standard templates that are explicitly linked to program objectives and criteria. However, it is essential that arrangements be put in place to ensure there is no repeat of a recommendation to Ministers to approve funding that resulted in a breach of program appropriations, and a recommendation to approve funding for a project that was just weeks from completion.

11. There was evidence that the selection of projects is transparent and based on merit. For one program, the transparency of the selection process could be strengthened through improved documentation of reasons for decisions. In particular, this could include recommendations from the AGO, as well as an order of merit rating scale weighted according to the significance of the appraisal criteria.

Managing and monitoring of agreements (Chapter 4)

12. The ANAO considers that formal agreements are a key component in the effective management of grants. Agreements should be supported by controls that link payments to identified milestones and which include adequate monitoring of payments and performance. It is crucial that there is adequate follow-up to determine whether projects and programs are on track and that there is early warning of emerging risks (if any) to the achievement of specified objectives.

13. The ANAO found that the AGO has a consistent and rigorous approach to managing funding assistance through formal agreements with grant recipients. These agreements reflect input from legal advisers, and provide a rigorous mechanism for managing ongoing risks.

14. For larger, more complex projects, funding agreements can involve lengthy negotiations. In one program valued at $400 million, negotiations for four major projects extended over a two-year period without any resolution to this time. The lengthy negotiations reflect the technical challenges involved and the high level of residual risks requiring careful, ongoing management. However, these timeframes pose risks to the timely achievement of program objectives. One option may be to set a deadline for negotiations to be completed with applicants after which funds are reallocated to future funding rounds or alternative 'reserve' projects, where possible.

15. From the records examined during the audit, the financial management systems in the AGO are sound. The AGO has implemented good practice in making payments progressively against milestones and withholding payments where milestone requirements are not met. The controls could be further tightened by ensuring that milestone payments are linked as closely as possible to anticipated outcomes, with a residual amount being withheld until the completion of the project. This would avoid projects meeting milestones but failing to achieve anticipated benefits at the end of the project—which was found in one case. After four years, for the seven programs examined, 71.1 per cent of the original budget estimates has been committed, but only 23.4 per cent has been spent. Original budget estimates have been subsequently revised and extended over a longer timeframe to more closely reflect the expenditure pattern.

16. Performance monitoring to date has been thorough and given the necessary priority. In some of the major expenditure programs, it is too early to tell whether the anticipated results will be achieved mainly because of the

long-lead times involved. However the risks remain significant–particularly as to whether program objectives will be achieved within the planned timeframe. In other lower expenditure programs, project level results are being achieved, although it is too early to assess the extent to which they will contribute to the program's broader objectives.

Evaluation and reporting (Chapter 5)

17. Periodic evaluation of programs is recognised as good practice to demonstrate that value for money has been obtained and as a source of any lessons learned. Results of evaluations, in conjunction with information on the actual performance of agencies, forecasts of future needs, and lessons learned, should be included in annual reports. This is important as annual reports are the primary accountability document from the agency to the Parliament.

18. The ANAO found that the AGO has implemented good practice in demonstrating a strong and consistent focus on evaluation across all programs. While noting the sensitivities involved, there is the opportunity to better inform stakeholders of the findings of evaluations. There is also scope to use the findings of evaluations to shape the direction of the Australian Government's Climate Change Forward Strategy that aims to position Australia's climate change response within a 20–30 year timeframe.[4]

19. Annual reporting to Parliament to date has not provided sufficient information on actual performance against targets, trends and changes over time, as well as about significant risks and challenges. As such, there is significant scope to improve the quality of information so that Parliament is better informed of the progress of the AGO in implementing programs of national significance.

Overall audit conclusion

20. The ANAO concluded that, on the basis of the seven programs examined, the administration of greenhouse programs focused on abatement or renewable energy has been characterised by substantial administrative challenges.

21. Administrative processes could have been better focused at the planning stage on comprehensive risk assessment as well as in designing programs with more measurable objectives and targets. The absence of these factors has made it difficult to measure results against program objectives and exposed some programs to risks that could have been better identified and

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[4] In November 2002 the Minister for Environment and Heritage outlined the Australian Government's intention to develop a long-term policy on climate change. This involved consultation with environment organisations, industry and other key stakeholders. The Minister highlighted that the Climate Change Forward Strategy will underpin the future direction of climate change policy in this country. (Media Release, 13 November, 2002).

treated in the early stages of the programs. The primary lesson learned is that priority must be given to performance measurement and comprehensive risk management at the design stage. If this is not achievable in practice, then certainly it must be conducted before the commitment of any substantial resources.

22. Administrative improvements have been put in place to overcome initial shortcomings in planning. Project appraisal and selection has been generally rigorous and based on merit. The AGO has put in place sound and well drafted agreements to manage residual risk at the program level. Monitoring and evaluation have been given sufficient priority. Linking payments to milestones has also assisted in the efficient management of funding allocations.

23. Nevertheless, substantial risks remain—particularly in terms of the timely achievement of program objectives. Areas for further improvement include refining performance measurement that should include the use of intermediate measures and/or assessments to gauge progress towards longer term objectives. A more consistent approach to project appraisal and selection would also assist in improving the transparency of decision-making. Attention also needs to be given to the timeframes of negotiations over funding agreements. Finally, improvements to performance reporting are necessary to enable Parliament to come to a more informed view on the progress and effectiveness of the AGO in implementing programs of national significance.

Agency response

24. The AGO has generally agreed with the Report and its recommendations and has advised the ANAO of its response to the audit as follows:

> The Report has found that overall, the AGO has delivered its programs efficiently and effectively. Appraisal and assessment of project applications is rigorous and transparent, there is a consistent and rigorous approach to managing funding assistance, financial management systems are sound and there is a strong and consistent focus on evaluation across programs.
>
> It also noted the significant potential risks in achieving greenhouse gas abatement in complex grant funded projects being implemented over the 2008–2012 Kyoto target period. Where issues have arisen in the early stages of a program, the AGO has recognised and addressed the issues with revisions to guidelines and processes aimed at minimising the future risk.
>
> The AGO agrees with the Report's first recommendation that risk assessments be undertaken in the design and development of new programs, or where this is not possible, as early as possible in the life of the program.

The Report shows that by and large, the AGO has been able to apply lessons learned over the life of the programs to continue to improve its practices. This will remain an important feature of the AGO's culture. The AGO will also respond to recommendations and suggestions in the Report for further improvements including in the areas of performance and evaluation reporting.

Recommendations

Set out below are the ANAO's recommendation with abbreviated responses from the AGO. Where the AGO has provided a more detailed response, this is shown in the body of the report, immediately after each recommendation.

Recommendation No.1 Para 2.19

In order to maximise value for money from grant expenditure and minimise the potential for any adverse impacts on program effectiveness, the ANAO recommends that, prior to consideration of any future funding assistance programs, the AGO conduct a comprehensive program risk assessment. If this timing is not achievable in practice, then the ANAO recommends it should occur as early as possible and certainly, before the commitment of any substantial resources.

Agency Response: Agree.

Recommendation No.2 Para 2.32

In order to assist in measuring and/or assessing program results, the ANAO recommends that prior to implementation of any future funding assistance programs, the AGO consider incorporating clearly defined and measurable intermediate outcomes and operational targets (where possible) to underpin program objectives.

Agency Response: Agree.

Recommendation No.3 Para 2.40

In order to improve the measurement and the consistency of performance reporting across programs, the ANAO recommends that the AGO give high priority to the completion of an integrated performance information system for measurement of greenhouse gas abatement.

Agency Response: Agree.

Recommendation No.4 Para 3.31

In order to improve the rigour and transparency of the appraisal and selection process, the ANAO recommends that the AGO seek Ministerial approval to apply, where appropriate, across competitive programs:

(a) an order of merit rating scheme; and

(b) recommendations on selection that highlight projects that are most likely to achieve program objectives.

Agency Response: Agree.

Recommendation No.5 Para 5.14

In order to enhance public reporting through the use of performance information to improve the quality and consistency of reports, the ANAO recommends that AGO annual reports include:

(a) consistent reporting against performance targets for programs;

(b) analysis of significant trends and changes over time; and

(c) analysis of identified challenges, risks and priorities.

Agency Response: Agree.

Audit Findings and Conclusions

1. Background

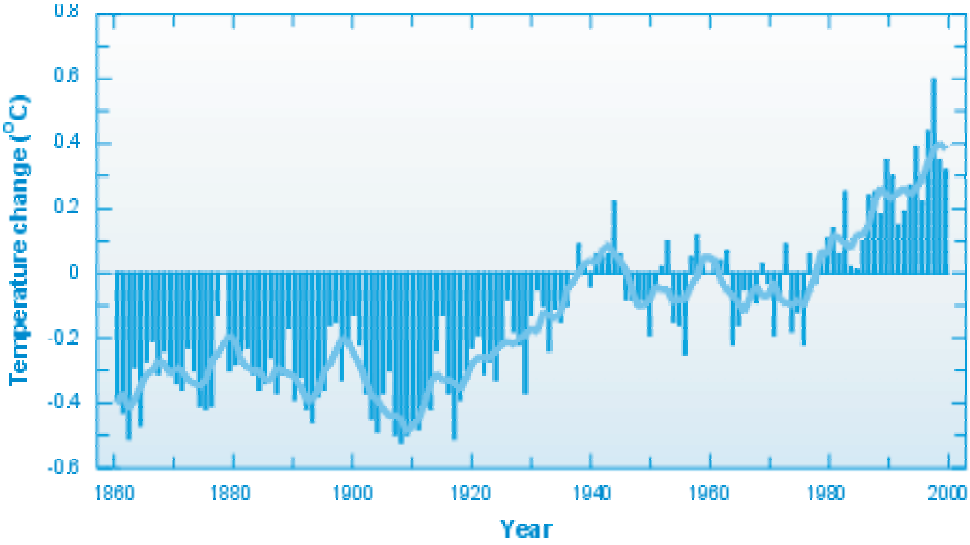
This Chapter provides background to the issue of climate change and the related policy framework. It also provides an overview of previous audits and reviews as well as the background to this audit.

What is climate change?

1.1 Climate change, caused by the emission of greenhouse gases, is recognised as a major issue, with the potential to cause significant damage to the national and global economy and to seriously affect human welfare and the integrity of natural ecosystems.[5] Carbon dioxide, methane and water vapour in the atmosphere provide a natural greenhouse effect that supports life on earth. However, there is scientific evidence to suggest that human activities can upset this balance by the discharge of additional greenhouse gases into the atmosphere.[6] Figure 1.1 depicts the rising temperatures worldwide.

Figure 1.1

Global temperature changes from 1860–2000



Source: CSIRO Atmospheric Research, Greenhouse Information Paper viewed in February 2004 at <http://www.dar.csiro.au/publications/greenhouse_2000a.htm>.

1.2 Greenhouse gases are now accumulating in the world's atmosphere faster than natural processes can remove them. The consequences are, as yet,

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5 Australian Greenhouse Office, *Corporate Plan 1999–2001* op cit.

6 Australian State of the Environment Committee, State of the Environment 2001, DEH, Canberra, p.25.

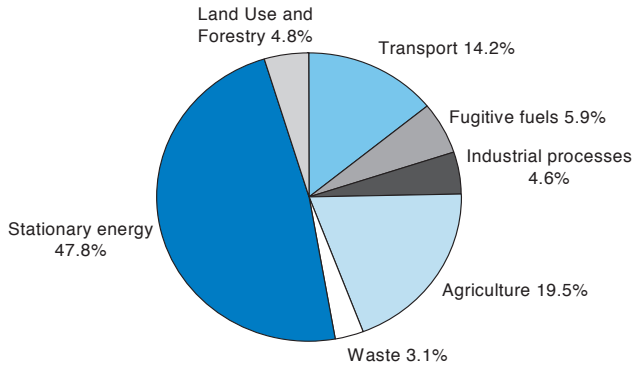
uncertain although there is the potential for higher sea levels, increased flooding and storm damage.[7] There is scientific evidence that global temperatures are increasing and will continue to do so over time. The Intergovernmental Panel on Climate Change (IPCC) has indicated that temperatures have increased by about 0.6 degrees centigrade over the past century and could increase by a further 6 degrees centigrade over the next century.[8]

Australia's response to climate change

1.3 Australia produces about 1.4 per cent of global greenhouse gases. On a per capita basis, our contribution is high compared to that of the rest of the world.[9] As outlined in Figure 1.2, 67.9 per cent of Australia's emissions are from the energy sector (this includes stationary energy, transport and fugitive emissions from fuel[10]).

Figure 1.2

Contribution to total CO_2-e emissions by sector in 2001



Source: Australian Greenhouse Office, *National Greenhouse Gas Inventory 2001*, AGO ,2003

1.4 In recognition of the challenges posed by climate change, the then Australian Government introduced energy management initiatives in 1990 as

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7 ibid.

8 New Scientist, *Global warming's sooty smokescreen revealed,* viewed July 2003 <http://www.newscientist.com/news/>, 4 June 2003.

9 CSIRO Atmospheric Research, *Greenhouse Questions and Answers*, viewed July 2003 < www.dar.csiro.au>, 2003.

10 Fugitive emissions from fuels covers the emissions of greenhouse gases associated with the production, processing, transport, storage, transmission and distribution of raw fossil fuels (Australian Government, *Interdepartmental Greenhouse Projections Group*, August 2003).

an interim response. In 1992, that Government ratified the Framework Convention on Climate Change. The overall objective of the convention is to stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous human-induced interference with the climate system. Australia's ratification involved the introduction of measures agreed between the different levels of government within the context of the 1992 National Greenhouse Response Strategy.[11]

1.5 More recently, the Australian Government has committed to a spending program of almost $1 billion towards greenhouse response measures.[12] In 1997, the growing international concern over climate change resulted in the introduction of the Kyoto Protocol (Kyoto) that was signed by Australia in 1998.[13] Greenhouse gas abatement measures were introduced in the 1997 'Safeguarding the Future' package.[14] A new National Greenhouse Strategy (NGS) was produced in 1998. Further measures were introduced in the 1999 'Measures for a Better Environment' package. Total greenhouse related appropriations for these two packages are $998.2 million.

1.6 In November 2002, the Prime Minister, in his statement on *'Strategic Leadership for Australia,'* affirmed that the Australian Government was 'committed to addressing the challenges posed by climate change in the domestic and international arenas'. Although the Australian Government has signed Kyoto, it has not been ratified. However, the Prime Minister has stated that the Australian Government 'will continue to develop and invest in domestic programs to meet the target agreed at Kyoto of limiting greenhouse emissions to 108 per cent of 1990 emissions over the period 2008–2012'.[15]

1.7 In 1998, the Australian Greenhouse Office (AGO) was created as a 'Prescribed Agency' and became an 'Executive Agency' in the Environment and Heritage Portfolio in 2000. The AGO coordinates domestic greenhouse policy and delivers greenhouse response programs.[16] The Agency's mission is to lead Australia's greenhouse action to achieve effective and sustainable results.[17] The Agency seeks, amongst other things, to facilitate projects that

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11 The 1992 *National Greenhouse Response Strategy* provided the formal policy framework for national and state/territory governments to the emerging challenges of climate change.

12 Warwick L Smith, *Independent Review of the Australian Greenhouse Office*, June 2002.

13 The Kyoto Protocol sets out legally binding greenhouse gas emission targets for developed countries, for the period 2008–2012 (the 'first commitment period').

14 The 1997 STF package involved expenditure of $180 over five years for measures to reduce greenhouse gas emissions.

15 The Hon. J Howard MP (Prime Minister), *Media Release: 'Strategic Leadership for Australia'*, loc. cit.

16 Department of Environment and Heritage, *Annual Report 2001–02*, DEH, 2002, p.11.

17 Australian Greenhouse Office, *Annual Report 2001–02*, AGO, 2002, p.1.

maximise cost effective greenhouse gas abatement and reduce the growth in greenhouse emissions. In 2003, the Minister for the Environment stated that:

> the Government's $1 billion greenhouse abatement program is on track to deliver about 67 million tonnes annually in emissions reductions–the equivalent of taking all today's cars, trucks and buses off the road. This compares favourably with last year's abatement projections of 60 million tonnes.[18]

Previous audits and reviews

1.8 The ANAO conducted a performance audit in 1992–93 titled, Audit Report No.32, *Implementation of an Interim Greenhouse Response*, which was conducted within the then Department of Primary Industries and Energy. The focus was on energy management programs. The audit concluded that the department had not taken sufficient action to implement the package of measures announced in 1990, despite the sense of urgent priority intended by the then Australian Government. The ANAO made 19 recommendations aimed at improving the administrative effectiveness of programs. The agency agreed with 18 of the recommendations.

1.9 The ANAO conducted a business support process audit in 2001–02 titled, Audit Report No.16, *Grant Administration in Small to Medium Size Organisations*, which examined the AGO as one of six government agencies. The audit focused on the monitoring, review, and risk management of grant administration. A number of shortcomings were identified. The ANAO recommended that risk management, monitoring and review of grants required improvement for all of the six agencies examined.

1.10 In November 2000, the Senate Environment, Communications, Information Technology and the Arts References Committee produced the report of their inquiry into measures to reduce greenhouse gas emissions.[19] The report noted that measures included in the 1997 package had not been fully implemented and there was little progress on many of the measures. It was too early at that stage to judge the effectiveness of programs, which commenced in July 2000. The Committee made 106 recommendations to the Australian Government. The Australian Government's response was mixed. While some recommendations were supported, the majority were found to be already addressed through existing measures, outside the scope of powers, or

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[18] Minister for the Environment and Heritage. *Media Release: Australia Moves Closer to Kyoto target*, September 2003. Note: The 67 million tonnes reflects the estimated impact of measures to meet the Kyoto target of 108 per cent above 1990 emissions in the period 2008–2012.

[19] The Parliament of the Commonwealth of Australia report of the Senate Environment, Communications, Information Technology and the Arts References Committee, *The Heat is On: Australia's Greenhouse Future;* Senate Printing Unit, November 2000.

were not supported. The progress in implementing relevant agreed administrative recommendations is discussed in chapter 4.

1.11 In January 2000, a private firm completed a *Review of Operations and Programs* at the AGO. Findings of this review included that the AGO's efficiency was negatively impacted by complex administrative arrangements. As a follow on from this, the Department of Finance and Administration completed an *Output Pricing Review* during 2000-01. As a result, output prices were reduced by 5 per cent, producing direct savings to the budget of $1.3m over two years.

1.12 In June 2002, an independent review of the AGO was completed by the Hon. Warwick L Smith. The review found that the AGO had achieved an acceptable level of efficiency and effectiveness, given some of the constraints it has faced. Various recommendations were made, particularly in the areas of governance, functions and consultation.

Audit objectives and scope

1.13 The objective of the audit was to examine and report on the administrative efficiency and effectiveness of significant programs administered through the Australian Greenhouse Office.

1.14 The audit has examined the status of seven materially significant programs across both the 1997 and 1999 packages. These programs included competitive grant programs, quasi-entitlement grant programs, a venture capital program and a voluntary program. The seven programs account for 87 per cent of total program cost estimates. Table 1.1 outlines the programs examined in the audit and provides a brief overview of their objectives. More detail is available in Appendix 1.

Table 1.1

Programs examined as part of the audit

Program	Announced funds ($ million)
1997—Safeguarding the Future Package	
Greenhouse Challenge Program (Challenge)–a voluntary industry program to reduce greenhouse gas emissions, drive continuous improvement and enhance knowledge and understanding of cost effective ways of managing greenhouse gas emissions.	27.1
Renewable Energy Equity Fund (REEF)–an investment program to encourage the commercialisation of research and development in renewable energy technologies by addressing capital and management constraints.	21.0[A]
Renewable Energy Commercialisation Program (RECP)–a grant program to support innovative renewable energy equipment, technologies, systems or processes that have strong commercial application and the prospect of significant abatement of greenhouse gas emissions over the longer term.	29.6
1999—Measures for a Better Environment Package	
Greenhouse Gas Abatement Program (GGAP)–a grant program to support activities likely to result in substantial emissions reductions or substantial sink enhancement, particularly in the first Kyoto commitment period 2008–2012.	400.0
Renewable Remote Power Generation Program (RRPGP)–a grant program to increase the uptake of renewable energy technologies in remote areas, assist in developing the renewable energy industry, help meet the energy needs of indigenous communities and lead to long-term greenhouse gas reductions.	264.0[B]
Photovoltaic Rebate Program (PVRP)–a grant program to encourage the long-term use of photovoltaic technology, increase renewable energy in Australia, reduce greenhouse gas emissions, assist in the development of the photovoltaic industry and increase public awareness of renewable energy.	31.0[C]
Alternative Fuels Conversion Program (AFCP)–a grant program to reduce greenhouse gas emissions and significantly improve urban air quality by facilitating heavier commercial road vehicle and public transport buses to operate on compressed natural gas (CNG) or liquefied petroleum gas (LPG).	75.0[D]
Extension of RECP–as per 1997 package with additional funding for industry development component.	26.0[E]
Total Value of Programs Examined	***873.70***

[A] Subsequent revised estimate of $19.5 million.

[B] Subsequent revised estimate of $179.9 million.

[C] Subsequent revised estimate of $34.6 million.

[D] Subsequent revised estimate of $71.4 million.

[E] The audit only examined the $20 million extension of the RECP not the $6 million allocated to the industry development component.

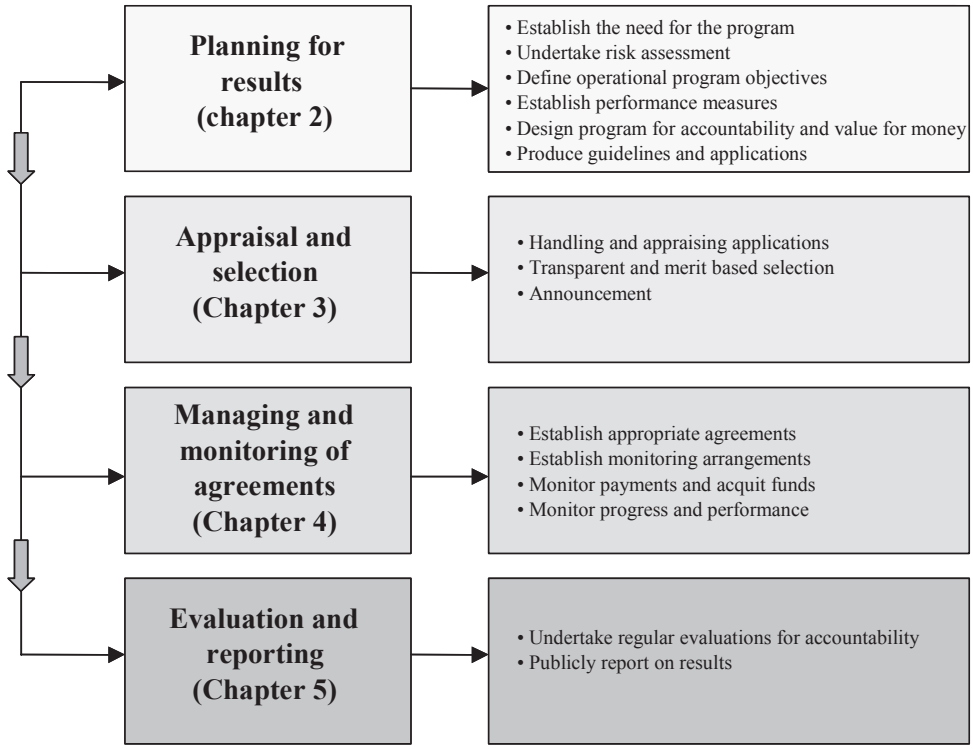
Source: ANAO based on information provided by the AGO. See appendix 1 for a more detailed outline on program objectives.

Audit methodology

1.15 The audit methodology was based on performance as assessed against better practice, including the ANAO Administration of Grants Better Practice Guide. The main steps involved in the grant administration cycle are provided in Figure 1.3. Also, comparative information on the relative performance of different programs was used to illustrate how performance could be improved in the future.

Figure 1.3

The grant administration process



Source: Developed by the ANAO

1.16 The ANAO interviewed AGO staff and examined files and records, including sampling a selection of successful, and unsuccessful, grant applications from relevant programs. The ANAO also invited submissions from state and territory governments responsible for administering certain programs. Ten submissions were received. Consultations were conducted directly with a number of stakeholders including relevant Australian Government agencies, as well as environmental groups, industry, and grant recipients.

Audit conduct

1.17 The audit was conducted in accordance with ANAO Auditing Standards. The audit commenced in May 2003 and the bulk of the fieldwork was conducted between May and August 2003. The total audit cost was $272 000.

2. Planning for Results

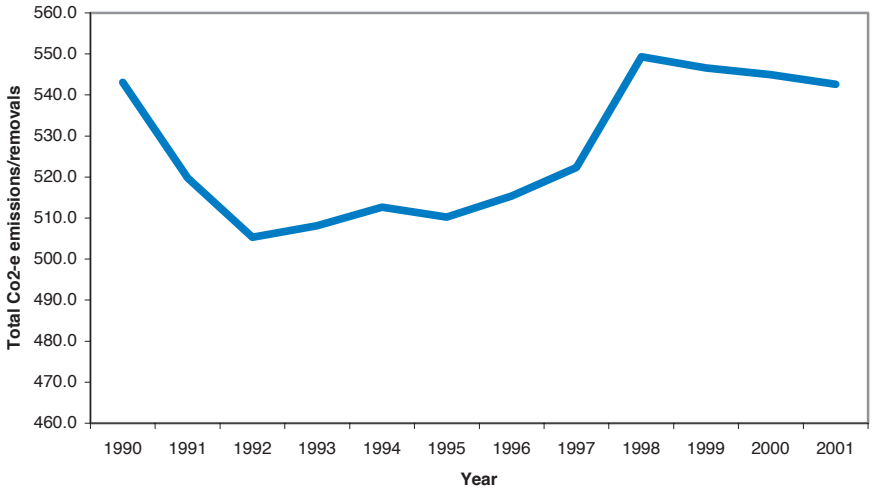
This chapter examines the planning conducted by the AGO in delivering the seven programs. The ANAO Administration of Grants Better Practice Guide notes that effective planning is the cornerstone of an economic, efficient and effective program. The fundamental aim of the planning process is to design programs that will achieve their operational objectives cost effectively.

Needs analysis

2.1 A needs analysis is an important part of program design. It is essential component of the planning process to demonstrate that program funds are well targeted and likely to achieve a value for money result. The need for greenhouse gas abatement measures was established through shortfalls in national greenhouse performance and higher levels of emissions (see Figure 2.1). The latest estimates from the AGO put Australia's greenhouse gas emissions at 542.6 mega tonnes (Mt) of CO_2-e for 2001.

Figure 2.1

Australia's Greenhouse Gas Emissions



Source: National Greenhouse Gas Inventory (2001) p.C-8. The emissions on the above graph are based on the Kyoto Accounting Rules and include land use changes and forestry.

2.2 Figure 2.1 highlights the changing level of emissions from 1990. While emissions substantially increased between 1992 and 1998, there was a reduction in emissions from 1998 to 2001. The National Greenhouse Inventory (NGGI) states that this decline (10.2 Mt) is largely the result of land use changes. The NGGI recognises the uncertainties and that 'this figure may not

represent a true trend as estimates for this period will be revised once remote sensing data and the land use change analyses are completed for subsequent years'.[20]

2.3 In 1997, the Prime Minister indicated that the 'Safeguarding the Future' (STF) package, valued at $180 million over five years, would 'reduce Australia's greenhouse gas emissions below projected levels'. Of this funding, $150 million was appropriated to the AGO. At the time of announcement, the measures were expected to reduce Australia's net emissions growth from 28 to 18 per cent (excluding land use change) or some 39 Mt by 2010 (from 494 to 455 Mt). The package also established the AGO to 'deliver these programs and provide a central point of contact for industry and other stakeholder groups.'[21]

2.4 The 1999 'Measures for a Better Environment' (MBE) package, with a greenhouse component valued at $796 million over four years, significantly enhanced government expenditure to address greenhouse gas emissions. Programs were designed to address the environmental consequences of the New Tax System and include 'options which will have maximum carbon reduction or sink enhancement capacity'. The Prime Minister, in correspondence to the then Leader of the Australian Democrats, stated that 'the major new environmental package will address the Democrats' concerns regarding the environmental and health consequences of the original New Tax System Package'.

2.5 The need for the packages of measures was established at the macro level. The AGO research provided the basis for further action on greenhouse gas emissions. Policy changes to the tax system also provided the basis for new greenhouse programs to address the environmental impacts of the new tax system.

Risk assessment

2.6 Risk assessment conducted at the design stage or early in the life of the program should be an element of the control framework necessary for the success of a program. Risk assessment should focus on maximising the value for money from expenditure and minimising adverse impacts by identifying and effectively treating potential risks. In the absence of formal risk assessment, it is difficult for administrators to have adequate assurance that programs have been designed to cost effectively achieve their objectives.

2.7 Across both packages, there were substantial shortcomings in the initial risk assessments. The 1997 package pre-dated the establishment of the AGO as well as the 1998 NGS. Indeed, one program had its genesis in 1995.

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[20] Australian Greenhouse Office, *National Greenhouse Gas Inventory 2001*, AGO, 2003, p.6.

[21] The Hon. J Howard MP (Prime Minister), *Media Release: 'Safeguarding the Future'*, November 1997.

Nevertheless, there is no evidence that a comprehensive risk assessment was conducted by responsible agencies at the design stage for the programs considered.

2.8 Similarly, for the programs considered from the 1999 MBE package, there was no comprehensive risk assessment conducted at the design stage. In this case, risk assessment was particularly important for programs developed with little involvement from the AGO and where consideration was conducted within a relatively short timeframe. In such instances, it is important that an agency conduct risk assessments at the outset of the development process. If this is not achievable in practice, then certainly as early as possible and before the commitment of any substantial resources.[22]

2.9 For most of the seven programs examined, the absence of early risk assessment did not subsequently have significant 'downstream' implications. However, for the PVRP[23] and the AFCP[24], two key programs within the 1999 MBE package, it had important consequences. Evidence suggests that the AGO did not have a sufficient initial understanding of the demand for program funds. As well, the consultation process was not sufficient to provide an accurate appreciation of the market conditions for the AFCP program. As a result, there was a low level of demand for the AFCP. Conversely, there was a higher than anticipated demand for the PVRP program. Across all seven programs, commitments as at 30 June 2003 represent 71.1 per cent of total allocations,[25] while actual expenditure account for some 23.4 per cent.[26] Program expenditure is outlined in chapter 4.

Photovoltaic Rebate Program (PVRP)

2.10 A comprehensive risk assessment would have been particularly beneficial for the management of demand and supply of subsidies early in the life of the PVRP program. The announcement of the PVRP created an immediate expectation in the market for the pending subsidy. However, the AGO was not able to progress the program at that time, as the necessary appropriation and delivery agreements were not in place. This led to an initial slump in sales of photovoltaic units[27] prior to the introduction of the program.

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22 Some programs have completed a risk analysis at a later stage. For example, GGAP completed a risk analysis in May 2003.

23 Photovoltaic Rebate Program—a rebate grant program funded through MBE to encourage the long-term use of photovoltaic technology, increase renewable energy in Australia, reduce greenhouse gas emissions, assist in the development of the photovoltaic industry and increase public awareness of renewable energy.

24 Alternative Fuels Conversion Program—a grant program funded through MBE to reduce greenhouse gas emissions and significantly improve urban air quality by facilitating heavier commercial road vehicle and public transport buses to operate on CNG or LPG fuels.

25 Refer appendix 2.

26 Refer table 4.1

27 A photovoltaic unit is one that generates electricity from sunlight.

The date of introduction of the program was brought forward six months to January 2000 in response to the concerns of industry. However, the pent up demand then exceeded supply. The rebate amount was adjusted in October 2000 to moderate demand.

2.11 However, the significant early demand under the PVRP, required an interim reallocation of resources from the RRPGP[28] budget. This was agreed with the Minister for Finance, along with some reprofiling of funding. Legal advice indicated that the unfunded liability of $5.3 million from the PVRP was regarded as being 'sufficiently close' to the RRPGP to be covered through a transfer of funds and repayment in later years. This transaction was confirmed through the additional estimates process.

2.12 In conjunction with the reallocation and reprofiling of program resources, there was a series of changes introduced by Ministers on advice from the AGO. There have been two changes made to the rebate level (September 2000 and May 2003). A cap on rebate approvals was introduced in February 2003. [29]

2.13 The ANAO considers that the AGO responded to the program challenges within a reasonable timeframe. However, these findings highlight the importance of undertaking an early risk assessment. In this case, a risk assessment may have assisted in identifying the level of demand for the program and the need for strengthened controls on expenditure.

Alternative Fuels Conversion Program (AFCP)

2.14 An early comprehensive risk assessment would have been beneficial in relation to the AFCP. This program aims to 'reduce greenhouse gases and improve urban air quality by facilitating heavier commercial road vehicles and public transport buses to operate compressed natural gas (CNG) and liquefied petroleum gas (LPG).'[30] The AGO consulted with industry in implementing the AFCP. However, the assessment of the market conditions undertaken with industry, proved to be optimistic and unrealistic, as indicated by the subsequent low uptake of program funds.

2.15 As at June 2003 (some three years after the announcement of the AFCP program), few grants had actually been allocated to projects and there had been significant underspends. This is primarily explained by the substantial market constraints to the acceptance of program objectives, and low consumer

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[28] Renewable Remote Power Generation Program—a grant program funded through MBE to increase the uptake of renewable energy technologies in remote areas, assist in developing the renewable energy industry, help meet the energy needs of indigenous communities and lead to long-term greenhouse gas reductions.

[29] Reductions in the rebate level from $4 per watt (previously $5.50 per watt) and the maximum rebate for individual householders of $4 000 (previously $8 250).

[30] AFCP Program Guidelines, p.2.

and industry confidence for CNG and LPG in heavy vehicles. While industry was consulted prior to the introduction of the program, there has been essentially no demand for program funds for trucks operating on compressed natural gas (CNG).

2.16 There are significant questions over the commercial viability of CNG given current market conditions in Australia. There is an absence of refuelling infrastructure to support CNG. While the CNG Infrastructure Program was aimed at overcoming this deficiency, the AGO has not been able to secure agreement for the necessary level of infrastructure. While three CNG refuelling facilities have been established, the successful tenderer for a contract to develop 14 refuelling facilities withdrew because of the level of commercial risk. As a result, there has been a very low demand for AFCP funds (See table 3.1). This is one of the important lessons learned and highlights why risk assessment is so important in the early stages of programs.

2.17 A further risk identified during the implementation of the program is that all vehicles operating on CNG are not proven to have lower greenhouse gas emissions. The issue relates to the risk of emissions of methane from the exhaust. Research from the AGO has found that, because methane is 21 times more potent as a greenhouse gas than CO_2, a small increase in methane emissions from incomplete combustion can more than offset the savings in CO_2. Research for the AGO indicates that 'the balance between reducing carbon dioxide and increasing methane is likely to result in a net deterioration in greenhouse (emissions) for dual fuel vehicles, compared with otherwise equivalent diesel vehicles emissions.'[31]

2.18 The AGO responded to these issues by conducting a review in November 2001, 15 months after program commencement. The review incorporated well-targeted research on the benefits and limitations of alternative fuels (See Chapter 4 for further details). This is very important work that provides a sound basis for future policy development in this area. However, a risk assessment would have usefully highlighted some of these issues in the early program stages. In particular, the need to have a robust consultation and analysis to test the accuracy of sectoral industry advice is a key lesson learned from this program.

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[31] Australian Greenhouse Office Discussion Brief, *The Natural Gas Program: Issues in Relation to 'After Market' Dual Fuel Conversions.*, August 2001, p.4.

Recommendation No.1

2.19 In order to maximise value for money from grant expenditure and minimise the potential for any adverse impacts on program effectiveness, the ANAO *recommends* that, prior to consideration of any future funding assistance programs, the AGO conduct a comprehensive program risk assessment. If this timing is not achievable in practice, then the ANAO recommends it should occur as early as possible and certainly, before the commitment of any substantial resources.

AGO response

2.20 Agree. The AGO notes that where a proposal is developed by an agency or department and progresses through the normal budget or cabinet approval process, a comprehensive program risk assessment should be an integral part of the development process. The government has recognised this and the creation of the Cabinet Implementation Unit within the Department of Prime Minister and Cabinet is aimed (in part) at ensuring that departments and agencies have conducted appropriate risk and needs assessments.

2.21 However, there are instances where programs are developed outside the department or agency, with the department or agency charged with implementing the program 'immediately' upon the provision of associated resources. In such cases it is not possible to conduct the risk assessment prior to implementation. It may, in such situations, be appropriate for the department or agency to conduct a program risk assessment early in the life of the program to confirm its appropriateness.

Program objectives

2.22 Measurable and precise objectives provide a solid foundation for effective performance management and accountability. Objectives should include quantitative, qualitative and milestone information or be phrased in such a way that it is clear when these objectives have been achieved.

2.23 The programs examined have key objectives focused on results relating to:

- greenhouse gas abatement (Challenge[32], GGAP[33]);

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[32] Greenhouse Challenge Program—a voluntary industry program to reduce greenhouse gas emissions, drive continuous improvement and enhance knowledge and understanding of cost effective ways of managing greenhouse gas emissions.

[33] Greenhouse Gas Abatement Program—a grant program funded through MBE to support activities likely to result in substantial emissions reductions or substantial sink enhancement, particularly in the first Kyoto commitment period 2008–2012.

- combined greenhouse gas abatement and air quality improvement (AFCP);
- encouraging longer term use of photovoltaic technology (PVRP);
- increasing the uptake of renewable energy technologies in remote areas of Australia to replace off-grid diesel generation (RRPGP); and
- the commercialisation and further development of renewable energy technology (RECP[34], REEF[35]).

2.24 Secondary or ancillary objectives vary from program to program but relate to matters such as industry development, regional and rural development and the creation of new employment opportunities.

2.25 The broad purposes to which program funds can be committed are outlined in these program objectives. For the 1997 package, these objectives were determined by the Australian Government before the AGO was established. For the 1999 MBE package, these are set out in the *Appropriation (Supplementary Measures) Act No 2 1999*. Specific objectives for the largest program expenditure, GGAP, are also included in this legislation.[36]

2.26 The key program objectives tend to be broad and not easily measurable. However, for GGAP, operational targets underpin broad objectives. This is good practice and particularly useful in providing an indication of progress towards objectives. For example, GGAP has an objective of funding *'substantial emissions reductions'*. The AGO has defined this term as projects with estimated emissions abatement greater than 250 000 tonnes CO_2-e per annum over the five years from 2008–2012. In total, GGAP is estimated to save up to 51.5 Mt of CO_2-e extrapolated over this period.

2.27 Other programs had targets established when they were announced by the Australian Government. The Challenge program involved forming partnerships between government and business to abate greenhouse gases. The program had a target of 500 members by the Year 2000 and 1 000 members by the Year 2005. While there was no specific target of abatement, there was an expectation at the time of the program's announcement that the

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[34] Renewable Energy Commercialisation Program—a grant program funded through STF and MBE to support innovative renewable energy equipment, technologies, systems or processes that have strong commercial application and the prospect of significant abatement of greenhouse gas emissions over the longer term.

[35] Renewable Energy Equity Fund—an investment program funded through STF to encourage the commercialisation of research and development in renewable energy technologies by addressing capital and management constraints.

[36] While the impact of the Goods and Services Tax (GST) was important background for the introduction of some MBE programs the legislation did not explicitly refer to this.

program could yield 'in the order of 15 Mt of abatement annually by the Year 2000' when compared with that of the base year.[37]

2.28 The AFCP has a target of converting 4 000 trucks and 800 buses to CNG or LPG, for each year of the program. The target for buses was further explained in terms of converting half the urban bus fleet to gas by 2015.

2.29 However, for other programs, it is difficult to gauge to what extent objectives can be achieved, in particular due to the long lead times for results (for example, between five to thirteen years). For example:

- to what extent will the PVRP 'assist in the development of the Australian photovoltaic industry'; and
- by how much will the PVRP 'increase the use of renewable energy in Australia' and 'reduce greenhouse gas emissions';
- to what extent will the RRPGP 'help in providing an effective electricity supply to remote users' or 'assist the development of the Australian renewable energy industry' or 'lead to long-term greenhouse gas reductions?'[38]

2.30 For the RECP and REEF, the ANAO recognises that it is particularly difficult to introduce end point targets to gauge success or otherwise, because the timeframes for commercial success are largely beyond the completion of the RECP funding and REEF investment. The REEF program continues to 2008-09. With the REEF investment approach, the rate of return on investments and development of fund managers provides some intermediate measure of how the program is progressing. Milestones also provide some intermediate measures for RECP.

2.31 The ANAO considers that quantifying expectations in program design is very important to provide measures or assessments as to whether or not programs are being successful in achieving their objectives. More broadly, the AGO outcome (that is, 'Australians working together to meet the challenge of climate change'), and the long lead times required for projects to achieve results, suggests that consideration may need to be given to introducing intermediate outcomes and operational targets. This would assist in making performance information more precise and easier to report on in terms of what has been achieved.

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[37] The Greenhouse Challenge, Implementation Plan, 1995 p.3.

[38] The take-up in RRPGP is dependant on many factors including the price of diesel and rural commodities, and the ability of remote power users to come up with the balance of initial capital outlay required. Since the program funds are dependant on the relevant diesel fuel excise paid in a jurisdiction, there is uncertainty over how much funds will be available in a given year (despite a financial cap for the program of $66 million per annum).

Recommendation No.2

2.32 In order to assist in measuring and/or assessing program results, the ANAO recommends that prior to implementation of any future funding assistance programs, the AGO consider incorporating clearly defined and measurable intermediate outcomes and operational targets (where possible) to underpin program objectives.

AGO response

2.33 Agree, noting that for some programs, intermediate outcome targets are not applicable. For example, where a project aimed at large scale abatement is scheduled for completion over three to six years and abatement is only expected upon completion. In such cases operational targets may be appropriate.

The design of performance measures

2.34 Designing a suitable performance measurement system is crucial for accountability and management purposes. Performance measures are important to provide a framework for the systematic collection of data and for assessing the extent to which an outcome can be attributed to an intervention. Performance measures should be accurate, complete and preferably quantifiable. However, in the case of qualitative measures, the assessment basis should be fully explained, particularly in relation to any judgements made.

2.35 The AGO has an outputs and outcomes framework, and some assessment can be made as to the progress of programs. However, performance measures have tended to develop along with the evolution of the programs, rather than being in place at the outset. This is particularly evident as programs were introduced at different times and to address different priorities. Some programs are designed to produce results in the Kyoto period (2008–2012), while some are designed to produce results in 2010.

2.36 The 2000 review of AGO programs found that many performance measures designed by the AGO were not easily measurable. Therefore, more attention should be given to assessing the impact of greenhouse gas emissions to enhance performance data collection.[39] The ANAO considers that the AGO has significantly improved the indicators used from the 2000-01 financial year. Performance measures used for the seven programs now include quantitative and qualitative indicators. See Figure 2.2 to illustrate these under one particular output group.

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[39] *'Review of AGO Operations and Programs'*, January 2000, p.7.

Figure 2.2

Output Group 2 - Taking early action

- Percentage change and the number of tonnes of emissions abated, categorised by type of organisation;
- Cost effectiveness of CO_2 emissions abatement;
- Percentage change and dollars saved against market pricing;
- Qualitative stakeholder evaluation using focus groups/surveys on effectiveness of programs;
- Percentage change and number of participating organisations;
- Number and dollar value of grants administered; and
- Number of consultation processes undertaken.

Source: Australian Greenhouse Office *Annual Report 2002–2003*

2.37 There are remaining challenges. A particular issue relates to measuring the impact of programs such as PVRP, and RRPGP, on the development of the renewable energy industry in Australia. At present, it is difficult to measure the contribution of these programs in relation to industry development, as there are no targets or measures as to what level of market support is desirable, and data collection has been largely confined to program evaluations.

2.38 In addition, the measurement of abatement has been an ongoing challenge for the AGO. The ANAO recognises the technical difficulties in measuring abatement. The Framework Convention on Climate Change and Kyoto have different rules for preparing emission projections and inventories. The programs themselves have different timeframes and methodologies for measuring abatement. While abatement is not necessarily the first priority for each program, it is an objective explicitly included in six of the seven programs examined in the audit. This also directly relates to the achievement of the AGO's central outcome 'Australians working together to meet the challenge of climate change'.

2.39 The reconciliation of the national emissions projections with the actual results of programs and progress data has been an ongoing challenge. Currently, the AGO has work underway to harmonise methodologies and calculations of abatement as far as possible. The ANAO considers that a more integrated system across programs to measure and report abatement should be given high priority. It is considered a key step towards enhancing the accuracy and consistency of performance information.

Recommendation No.3

2.40 In order to improve the measurement and the consistency of performance reporting across programs, the ANAO recommends that the AGO give high priority to the completion of an integrated performance information system for measurement of greenhouse gas abatement.

AGO response

2.41 Agree in principle. This issue is to be addressed as part of the Climate Change Forward Strategy.

The design of program delivery

2.42 Key issues in program delivery are designing programs to be cost-effective and transparent. This includes avoiding duplication with related programs and the consideration of the best value for money means of achieving program objectives.

2.43 The programs examined by the ANAO included a well-established program with a long history (that is, the Challenge, which was first introduced as a 'no regrets'[40] initiative in 1995) as well as programs developed as part of the 1997 STF and 1999 MBE packages, which are a mix of no regrets and other options.

2.44 A range of forms of delivery have been implemented, as illustrated in table 2.1. Programs are delivered by the AGO, the states and territories, or in one case by a private fund manager. For some programs, such as the PVRP, the state delivery mechanism was selected to avoid duplication with existing projects. Different delivery options were chosen to reflect the requirements and client base of each program. Competitive programs such as GGAP and RECP were designed to test the market for larger scale projects through successive funding rounds. Programs such as PVRP were designed to provide a quasi-entitlement for smaller projects that could demonstrate that they met program eligibility criteria.

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[40] No regrets measures refer to a measure that has other net benefits (or at least no net costs) besides limiting greenhouse gas emissions or conserving or enhancing greenhouse gas sinks. (Australian Government, *Australian Greenhouse Response Strategy*, 1992).

Table 2.1

AGO program delivery structure

	Who Delivers Program			Type of Delivery		
	AGO	State	Other	Competitive	Quasi-entitlement	Other
GGAP	✓			✓		
REEF			✓[A]	✓		
RECP	✓			✓		
AFCP	✓			✓		
PVRP		✓			✓	
Challenge	✓					✓[B]
RRPGP		✓			✓	

[A] REEF funding is under contract to AusIndustry which in turn has appointed a private company, CVC REEF, as a fund manager

[B] Challenge is a voluntary program

Source: Developed by the ANAO based on AGO information

2.45 In terms of cost effectiveness of delivery, the AGO has used one measure that provides an assessment of the cost per tonne of CO_2-e abated. This is a useful indicator for programs that have abatement as their primary objective. The most cost effective programs that achieve greenhouse gas abatement include GGAP at $4-8 per tonne of CO_2-e in the Kyoto period, and the voluntary Challenge at $2.70 per tonne of CO_2-e. In contrast, programs involving renewable energy (that have other primary objectives), and in particular photovoltaic cells that have a high initial capital cost, have abatement costs of approximately $520 per tonne of CO_2-e.[41]

2.46 This information highlights those programs with best value for money, in terms of achieving abatement, and provides valuable lessons learned within the context of the Climate Change Forward Strategy currently being developed. The Forward Strategy aims to position Australia's climate change response within a 20 to 30 year timeframe.

2.47 While programs examined by the ANAO have been designed to meet transparency and other public accountability requirements, some other issues have been expressed by Parliament in the case of the design of the Challenge program. The Senate Environment, Communications, Information Technology

[41] These cost effectiveness figures are based on the estimated level of abatement for the programs not actual figures. They were provided by the AGO. All figures represent 'Kyoto tonnes' of CO2-e that reflects the accounting rules for abatement under Kyoto.

and the Arts References Committee 'The Heat is On' report in 2000 stated that:

> The Committee was not convinced that the administration of the Greenhouse Challenge Program conforms to acceptable standards of transparency. …The present voluntary arrangements do not encourage industry to adopt systematic and comprehensive approaches to emissions reduction which go beyond no regrets.[42]

2.48 While recognising that the Challenge was originally designed within a 'no regrets' policy context and has multiple objectives, the primary issue is whether the abatement claimed accurately reflects the results achieved from the program. This requires the establishment of a causal linkage between the Challenge membership and any greenhouse gas abatement. In particular, the original design of the program did not recognise that improvements in energy efficiency (and the consequential improvement in greenhouse gas emissions) would occur in industry over time. This contrasts with a similar initiative in the USA where the goal was to improve emissions intensity by 18 per cent, four-percentage points more than the 14 per cent improvement already expected.[43]

2.49 The ANAO considers that the original design of the Challenge program was not conducive to separating business as usual (BAU) from any abatement that may be achieved beyond this scenario. For example, to what extent can abatement be claimed as a result of the Challenge program, if companies are also improving their environmental management such as through:

- adopting ISO 14001 standards in relation to environmental management systems; and/or
- complying with state initiatives, such as action plans for energy auditing and reporting for companies (Victoria), as well as compulsory greenhouse benchmarks for larger emitters (NSW).

2.50 Verification and modelling work conducted by the AGO provides some assurance that individual companies do not overstate their results. Over time, there have been continuous improvements in the methodologies used to report and estimate abatement under the Challenge. Further refinement has

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[42] The Parliament of the Commonwealth of Australia report of the Senate Environment, Communications, Information Technology and the Arts References Committee, op cit, pp.366-367.

[43] Energy intensity measures the amount of greenhouse gases emitted per unit of economic activity. In the United States, this ratio has generally improved for 50 years or more (The United States General Accounting Office, *Climate Change–Preliminary Observations on the Administration's February 2002 Climate Initiative* October 2003). In Australia, energy intensity improved by 18 per cent between 1973–74 and 2000–01 largely as a consequence of shifts in fuel sources from solid fuels to gas. (Australian Bureau of Agricultural and Resource Economics (ABARE) *Trends in Australian Energy Intensity 1973–74 to 2000–01 Report for the Ministerial Council on Energy*, 2003).

been recognised as part of continuous improvement. This needs to be given a high priority to provide an assurance that the program design reflects acceptable standards of transparency and accountability. This is discussed further in Chapter 4.

Guidelines and applications

2.51 Clear, consistent and well-documented guidelines and application forms are an important component of an effective program administration system. The guidelines and application forms should include all information necessary to assist applicants to provide a quality application. They should specifically refer to the eligibility and selection criteria as well as any requirements for monitoring and reporting.

2.52 All relevant programs examined currently have detailed guidelines that cover issues of eligibility, selection criteria, appraisal, monitoring and evaluation. Programs have application forms that are clear and linked to guidelines and program objectives. In most instances, these application forms are available on the AGO website along with guidance and explanatory notes.

2.53 In AGO administered programs, the guidelines have improved over time and been adjusted to better manage program risks. GGAP has well developed guidelines that have been enhanced over time through providing more detail on calculating abatement. The introduction of a standardised calculator to enable applicants to determine their estimated abatement in area of bio-fuels (including ethanol and other fuels derived from organic sources), has assisted with streamlining the application process.

2.54 In the AFCP, the initial guidelines were not sufficiently linked to the legislation that specifically limited the program to CNG and LPG fuels. While the guidelines included reference to 'facilitating heavier commercial road vehicles and public transport buses to CNG and LPG fuels,' these fuel types were not referred to in the merit selection criteria. In addition, the guidelines included a clause that allowed AFCP funds to be allocated to broader activities that 'will advance the overall objectives of the AFCP'.

2.55 Following from a major review of the AFCP program completed in 2002, the AGO developed revised guidelines to address the shortcomings as well as to enhance program effectiveness. For example, this included the introduction of a 'Type Approval Register' to provide a higher level of assurance that engine products meet the AFCP emission requirements. The Minister approved these guidelines in August 2003. The ANAO considers that the new program guidelines should assist in providing clearer guidance on eligible projects under the program.

2.56 For the PVRP and the RRPGP, the states and territories are responsible for the development of program application forms and guidelines (with AGO approval). However, the Minister for the Environment is responsible for the

approval of major projects over $500 000 in value. Major RRPGP projects are considered on the merit of submissions made by applicants.

2.57 For major RRPGP projects, Western Australia has developed specific guidelines, while other jurisdictions use generic guidelines to guide major project applicants. These public guidelines for programs are designed to meet small-scale quasi-entitlement projects (valued at between $10 000 and $100 000) as well as large-scale projects (valued at between $500 000 and $55 million). The scale of risks are very different. It would therefore be highly desirable to have more specific, publicly available, guidance on Australian Government requirements given that final approval rests with the Ministers for the Environment and Industry Tourism and Resources.

ANAO Conclusion

2.58 The ANAO recognises that there are significant technical challenges in implementing programs designed to address greenhouse gas abatement and/or support renewable energy technologies. It is complex area with a high degree of uncertainty as to whether a new technology or approach will actually achieve program objectives—particularly in regard to abatement of greenhouse gases.

2.59 The 1997 STF package preceded the establishment of the AGO. The 1999 MBE package was conceived and developed with little involvement from the AGO. Notwithstanding this, programs were implemented by the AGO without comprehensive risk assessment. For most of the seven programs examined, the absence of an early risk assessment did not have significant 'downstream effects'. However, for two programs in particular, the limited understanding of potential demand and the shortcomings in the consultation and analysis, resulted in unforeseen consequences that could have been identified and addressed earlier.

2.60 Program objectives, overall, tend to be broad and not easily measurable given the long lead times for results. While two programs have sound operational targets, the absence of targets in other programs makes it difficult to gauge to what extent objectives are being achieved. Performance information has also evolved with the programs. There are remaining challenges, in particular improving the consistency and integration of the methodologies and calculations of greenhouse gas abatement across programs. The ANAO considers that work in progress in this area by the AGO should be given a high priority.

2.61 Over time, the AGO has put in place a range of measures to address the shortcomings identified in program planning. Performance information has been improved; guidelines have been tightened; guidance to applicants has been enhanced; and risks have been managed.

2.62 The essential lesson learned is that priority must be given, at the planning stage, to comprehensive risk assessment. If this is not achievable in

practice, then certainly it must be conducted before the commitment of any substantial resources. Operational targets that facilitate measurement of results should support program objectives, where appropriate. Where there are common or key objectives across programs, there should be common measures to indicate whether or not results are being achieved.

3. Appraisal and Selection

This chapter examines the appraisal and selection of applications for Australian Government financial assistance. Programs examined, included competitive programs as well as programs designed to provide funding on a quasi-entitlement basis through the states and territories. The ANAO did not examine the merits or otherwise of individual decisions by Ministers or the selection of projects by the states and territories or the fund manager in REEF. Rather, the audit examined whether or not there was a systematic and rigorous approach to project appraisal and transparent selection based on published guidelines and criteria. The Challenge is not considered in this chapter as it is a voluntary program and there are no materially significant appraisal or selection requirements involved.

Appraisal of applications

Appraisal of competitive program applications

3.1 The measure of a good appraisal process is one that is transparent and is likely to assist in selecting those projects that best represent value for money in the context of the objectives and outcomes of the programs. The ANAO Better Practice Guide on the Administration of Grants notes that grants should add value by achieving something worthwhile that would not occur without grant assistance.

3.2 For the competitive programs examined, the approach taken by the AGO in appraisal of applications is systematic with a focus on assessing the merits of projects against program objectives. Table 3.1 outlines the number of approved projects and funding as at 30 June 2003 for the four competitive programs examined as part of the audit.

Table 3.1

Competitive Programs

Program	Applications	Approved projects	Total approved funding as at 30 June 2003 ($m)
RECP	223	51[A]	35.1
GGAP	178	18	165.2
AFCP	85	40	14.9
REEF	75	6	7.6[B]

[A] Two projects that were approved for funding have not proceeded

[B] The $7.6m invested is Australian Government funding out of the total investment of $11.7m.

Source: ANAO based on information provided by the AGO.

3.3 The AGO makes extensive use of external contractors for technical and financial advice in appraisal of applications. There is evidence that such contractors are engaged for a clear purpose. Selection meets probity and value for money considerations. As well, contractors are required to complete conflict of interest declarations.

3.4 Appraisal in GGAP, RECP and AFCP involve project assessment by the AGO with the final decision resting with Ministers or their delegate, in the case of the AFCP.[44] There is evidence of rigour in the appraisal process and examples of improvements over time for these programs. The formal appraisal criteria are linked to program objectives. The appraisal of applications is guided by proforma assessment sheets. These are derived from the stated program objectives and criteria.

Greenhouse Gas Abatement Program (GGAP)

3.5 In GGAP, there is a good application of specialist technical assessment based on the published criteria. There is also an examination of the strengths and weakness of applications. Project appraisal involves set template assessment criteria covering:

- funding required;
- total project cost;
- estimated additional abatement in 2008–2012 in tonnes CO_2-e (including error bounds);
- estimated cost per tonne of CO_2-e abated in 2008–2012;
- estimated national net cost per tonne of CO_2-e abated in 2008–2012;
- percentage of total costs funded by non-GGAP sources;
- overall strengths and weaknesses of the proposed project; and
- key issues to be negotiated in the funding agreement.

3.6 While the ANAO considers that appraisal mechanisms in GGAP are rigorous, there is opportunity to further tighten the project assessments. In particular, project appraisals from Round 1 and 2 were very informative as to risks, strengths and weaknesses of individual applications. However, it would be highly desirable to demonstrate that all key criteria are fully discussed in every project assessment that is provided to Ministers, rather than just in abbreviated form. Tightening the project appraisals should provide an

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[44] Ministerial decisions for the competitive programs are made by more than one Minister. On some occasions, this has involved a Ministerial Council comprising the Ministers for the Environment and Heritage, Agricultural, Forestry and Fisheries, Industry, Tourism and Resources and the Minister for Finance have been responsible for final decisions on projects. On other occasions, each responsible Minister has been required to sign off on decisions.

assurance that all key criteria and risks are outlined as clearly as possible so that Ministers have sufficient information on the merits of each application. The ANAO also considers that it would be highly desirable to consistently include internal project rates of return so that it is clear as to whether a grant is required from this perspective.

Renewable Energy Commercialisation Program (RECP)

3.7 In RECP, the ANAO considers that the appraisal mechanisms give a very good overview of the quality of applications to enable the Minister to make a comparative assessment in relation to the merits of projects. Each project assessment consistently outlines project costs, grant recommended, a description of the project, technical expert panel comments and AGO committee comments and advice to Ministers. The AGO has implemented good practice in RECP through using an ordinal system (that is, using a high, medium, or low classification system) to rate applications against the published criteria.

Alternative Fuels Conversion Program (AFCP)

3.8 In the AFCP, the selection process is guided by a summary assessment sheet and briefing to the decision-maker that outlines:

- details of the vehicles sought including fuel type, cost of vehicle (or conversion);
- essential criteria such as urban and greenhouse emissions performance;
- desirable criteria such as promoting community awareness; and
- an overall assessment including comments from technical assessors.

3.9 Financial delegations for AFCP have been increased to $100 000 to enable more rapid assessment and approval of projects. Hence, some decisions for funding are made by AGO officers rather than Ministers, which assists in enhancing the timeliness of decisions for some lower risk projects.

Renewable Energy Equity Fund (REEF)

3.10 REEF involves a competitive selection process, but differs from the others in that a licensed fund manager makes decisions. Neither government agencies nor Ministers take part in the selection of projects under REEF. There is evidence to suggest that the program has a rigorous selection process that is consistent with commercial criteria. The REEF fund is based on the Innovation Investment Fund vehicle, established by the Australian Government in 1997 to promote better access to venture capital funding for the commercialisation of research and development. As such, REEF is not a grant program but rather a venture capital investment program that involves pooled government and private sector capital. As noted in the 2002 evaluation, 'the fund manager adopts an audit approach to the evaluation of proposed investments. The approach is fully documented and establishes a trail for investment

decisions'[45]. Criteria include consideration of market analysis, product characteristics such as patents and trademarks, marketing and sales activities, research and development activity, management and personnel and financial data. The program framework is a venture capital investment model and the expected rates of return are typically in the order of 25 to 35 per cent per year for this investment class.

Anomalies in project appraisals

3.11 For the competitive programs examined, the overall approach for appraising projects is systematic, with particular examples of good practice identified. However, a small number of anomalies in appraisal have been noted during the audit.

3.12 Under the RECP, there was one instance in Round 2 where funding of up to $1 million was recommended for a private company for a project that was close to completion. The applicant had been rejected for a similar application in an earlier round. The initial AGO brief brought to the Ministers attention that the AGO would not 'normally have expected that RECP funding would be offered to a project that was virtually complete.' Following a Ministerial request regarding the legality of awarding the grant under those circumstances, the final brief to the Minister indicated that, 'we recognise that an offer of a grant was not critical to the implementation of the project since it was nearing completion, however we consider that support is still warranted. The program guidelines do not preclude funding for projects which are already fully committed.'

3.13 The guidelines were adjusted in subsequent funding rounds to attempt to clarify this situation. The ANAO considers that an important part of project appraisal is that an agency should be satisfied that projects would not proceed without assistance. Otherwise, funds paid in such circumstances provide no added value and represent an opportunity cost to the Australian Government. The ANAO considers that all future programs should address this criterion in the appraisal process.

3.14 In AFCP, the AGO recommended in June 2000 that the Minister agree to $150 000 being used to 'support applications for road fuels and technologies that are not based on CNG and LPG'. This was contrary to the legislation authorising the program. The AGO advised the Minister that the program guidelines 'permitted flexibility regarding other fuel types' and that the AGO could 'suspend limitations imposed by the guidelines on a particular application, where the AGO considers this suspension would significantly advance the objectives of the AFCP'. The Minister subsequently endorsed the recommendation. A payment of $18 000 was made to a private bus company and the project was launched in December 2000. At the time, the AGO did not

[45] Evaluation of Renewable Energy Equity Fund Program, November 2002, p.23.

adequately assess the legal risks of this appraisal and recommendation to the Minister.

3.15 Subsequent legal advice received by the AGO 12 months later indicated that the funding breached appropriations. Upon receipt of this advice the matter was addressed and funds were then transferred to an account consistent with the purposes of the grant to remedy the situation. The ANAO recognises that the AGO was endeavouring to overcome the difficulties being experienced in relation to the low number of CNG and LPG projects funded. However, in this case the inadequate attention to the potential risk in the appraisal resulted in inappropriate advice to a Minister and a payment beyond appropriations.

Technical challenges in appraisal

3.16 The ANAO also recognises that there are technical challenges in appraising projects in terms of their greenhouse gas abatement potential. Appraisal has to be particularly rigorous in relation to greenhouse gas abatement or technology, as estimates of the level of abatement, or the potential benefits from a particular technology, are not necessarily self-evident or well understood. Evidence suggests that applicants can easily overstate the potential benefits of their proposals.

3.17 In particular, applicable scientific evidence is limited and the AGO itself has made an important contribution to knowledge in key areas such as the greenhouse costs and benefits of bio-fuels. Case study A illustrates the point. This case study also demonstrates some of the difficulties involved and the detailed work required to appraise applications in several AGO competitive programs.

Case Study A—Calculating the greenhouse benefits from ethanol projects

An ongoing challenge for the AGO has been assessing the greenhouse and air quality impacts of ethanol blended fuels.

In 2001, the AGO released a study on transport fuels, *Comparison of Transport Fuels (CSIRO 2001).* The results from the study suggested that 10 per cent ethanol blended fuels were essentially greenhouse neutral. The report outlined that the impacts of ethanol blends were dependent on the production process and feedstock used. The findings of this study were confirmed by subsequent work undertaken by CSIRO in June 2003. In this case, the CSIRO concluded that ethanol blends can deliver modest greenhouse benefits in some circumstances.

The Department of Environment and Heritage brief to the Minister's office noted that while the CSIRO research concluded that ten per cent ethanol-blended fuels may be marginally beneficial under very specific production conditions, it also concluded that ethanol produced from any feedstock other than waste products is likely to increase net emissions. In relation to air quality, toxic emissions from ethanol-blended fuels vary from standard fuel blends. There is a decline in some emissions such as benzene, an increase in other toxic chemicals such as xylene and acetaldehyde.

Advice to the AGO from an expert consultant assessing applications for ethanol projects indicated that the two GGAP projects funded under Round 1 (in combination with pre-existing activities) will account for all waste sugar cane products in Australia that would be able to meet the conditions for a greenhouse benefit. At this stage, it appears unlikely, therefore, that additional projects of this type (that is, those based on sugar cane) would result in further greenhouse gas reductions.

The ANAO considers that the AGO has made significant progress in assessing the greenhouse benefits of ethanol-blended fuels. In particular, the considerable differences between the Australian car fleet compared with overseas examples means that international research is not necessarily applicable to the Australian context. This research has provided valuable advice to the AGO for the appraisal of bio fuel projects.

Appraisal of quasi-entitlement program applications

3.18 Quasi-entitlement programs involve providing a subsidy for those applicants who can demonstrate they meet the eligibility criteria. Table 3.2 outlines the number of approved projects and funding, as at 30 June 2003, for the two state managed quasi-entitlement programs examined as part of the audit.

Table 3.2

Quasi-entitlement programs

	Approved projects (number)	Total approved funding as at 30 June 2003 ($m)
PVRP	5522	27.9
RRPGP Sub-Programs	2046	28.2
RRPGP Major Projects	7	69.3

Source: ANAO based on information provided by the AGO

3.19 For quasi-entitlement programs, project appraisal is carried out by state or territory agencies on behalf of the Australian Government. Assessments are conducted (by the states or territories) on eligibility criteria relevant to the program objectives. Since these state managed programs are quasi-entitlements, the appraisal of applications is a relatively straightforward process.

3.20 A variation on the quasi-entitlement nature of the RRPGP is the program element concerned with major projects. While under the RRPGP, the states and territories administer programs on behalf of the Australian Government, the Ministers for the Environment and Industry Tourism and Resources are responsible for the approval of major projects over $500 000 in value. Major RRPGP projects are considered on the merit of submissions made by applicants. As at 30 June 2003, seven major RRPGP projects (valued at $69.3 million) had been approved. They are set out in Table 3.3.

Table 3.3

RRPGP Approved Major Projects to October 2003

Project	Estimated annual abatement (tonnes)	RRPGP funding ($million)	Rebate per annual tonne abated ratio	20 Year abatement cost per tonne[A]
A	6 210	5.3	857	43
B	67 500	55.0	815	41
C	1 080	1.0	926	46
D	1 102	1.3	1 216	61
E	427	1.3	2 954	148
F	1 161	3.4	2 950	148
G	2876	1.9	664	33
Total	**80 355**	**69.3**	**1 730**	**86**

[A] based on the assumption that renewable generation projects have a life of at least 20 years.

Source: Developed by the ANAO based on information provided in RRPGP application forms.

3.21 RRPGP major project applicants are currently required to provide the AGO with a detailed proposal for consideration. The AGO then develops a comprehensive project assessment that outlines project details and includes a recommendation on whether or not to provide funding to the Minister.

3.22 The AGO has a broad appraisal checklist that is used to assess these major projects. However, the ANAO notes that there is considerable complexity and ongoing negotiations between the AGO and applicants to address project management matters. At the same time, there is significant variation in risk between major RRPGP projects and small-scale remote renewable projects. It would be useful for the AGO to actively work with the states and territories to better document and communicate the appraisal requirements for major projects with potential applicants.

Selection of projects

Transparency of the selection of projects involving Ministerial decisions

3.23 The transparency of the decision-making process was examined to seek an assurance that better practice principles had been followed in terms of good record-keeping and documentation of reasons for decisions, and whether this met the standards required by the Prime Minister's *Guide on Key Elements of Ministerial Responsibility*[46]. The audit examined GGAP, RECP, major RRPGP and AFCP projects where Australian Government Ministers were involved in the selection of projects rather than the states and territories.

3.24 There is evidence across programs that record-keeping within the AGO is sound and consistent with the high standards expected in terms of being complete and providing adequate documentation to support the basis of decisions. In the RECP, AFCP, and for major RRPGP projects, the AGO provided recommendations to Ministers on the relative merits of projects.

3.25 In RECP, an ordinal rating scale was used, drawing on advice from a technical expert panel based on the program's merit criteria. The ANAO considers that the decision-making process for RECP is transparent. There is also sufficient evidence that projects are selected on merit due to the rating scale and recommendations provided to Ministers. There is evidence of only one case where Ministers overturned the AGO's recommendations. On that occasion in April 2001, reasons for non-approval were provided by the Ministers. They related to the limited innovation of the project and hence the lack of potential for it to contribute to the RECP broader objective.

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[46] These guidelines (based on the *Administrative Decisions (Judicial Review) Act 1977*) include the principles that each decision needs to meet basic standards of fairness and be made on the merits of the case, with documentation to support the reasons for decision.

3.26 In AFCP, and for major RRPGP projects, no rating scale is used as it is not appropriate given the program did not use competitive grant rounds. However, recommendations were provided to Ministers for each project. In all cases, as at 30 June 2003, Ministers agreed with the recommendations provided by the AGO. The ANAO considers that the selection process for AFCP and major RRPGP projects is transparent. As well, there is sufficient evidence that projects are selected on merit due to the comprehensive assessment and recommendations provided to Ministers.

3.27 One area where transparency and documentation could be improved is in GGAP. The AGO has grouped projects into risk categories but unlike other competitive programs, provides no recommendations for Ministerial decision-making. It is noted that the AGO was requested not to provide this by Ministers.[47] The ANAO considers that, while Ministers have ultimate responsibility for decision-making, the absence of recommendations places additional weight on documenting reasons for decisions. This is discussed in the Case Study B.

Case Study B—The selection of projects in GGAP

In GGAP Round 1, the Ministerial Council on Greenhouse endorsed the final list of eleven successful projects valued at $102.7 million in March 2001. Their reasons for decision were formally documented in April 2001 by the AGO, reflecting the view that the benefits and other strengths outweighed the costs and other weaknesses. For projects that were not approved, reasons for decisions focused on the risks and competitiveness of the projects. The ANAO considers that, given the size and risk of GGAP projects and the absence of an order of merit and recommendations, more detailed and project specific reasons for decisions by Ministers would have increased the transparency of selection.

In GGAP Round 2, the Ministerial Council was not convened and Ministers made the project selection independently. Ministers initially agreed on five projects for funding (valued at up to $49.1 million) in early October 2001. Due to the 2001 election, the final decision on the remaining six projects occurred between July and September 2002. In this round the AGO categorised the projects by risk. These categories were:

1. competitive project with manageable risks;
2. less competitive project with risks that need careful management through agreements;
3. no greenhouse benefit ascertained; and
4. ethanol projects.

[47] This was stated in a formal brief to the incoming Minister for Environment and Heritage after the general election in 2001. The brief indicated that: 'in accord with Ministerial council on Greenhouse instructions, no recommendations for funding or otherwise were included in this brief'.

Overall for Round 2, Ministers selected all projects from 'category one', as well as one project from 'category two'. Generally, reasons for the decisions were very brief and indicative of Ministers' support or otherwise for a project. Implicit in the selection is the detailed appraisal provided by the AGO. There was no further documentation on reasons for decision beyond the risk category although, in some instances, Ministers added conditions to their approval or indicated that the project was worth the risk. However, Ministers did not provide documentation on what weighting was given to the relative strengths and weaknesses highlighted by the AGO in each project appraisal.

Given the major risks and value of projects involved in GGAP, additional documentation to explain reasons for decisions would have assisted in improving the overall transparency of the process.

3.28 Greater detail in the reasons for decisions, as highlighted in the case study, would have assisted in explaining why some projects received funding given the level of risks raised in the appraisal brief. For example, the GGAP Round 2 'category two' project approved for funding was assessed by the technical adviser in the project appraisal as follows:

> the viability of the project is totally dependent on the achievement of the proposed market shifts from road transport. Little evidence has been provided by the proponent to support the proposed modal shifts. Without these details, proper evaluation of the proposal is unachievable…It is unlikely that significant greenhouse gas reductions (250 000 tonnes per annum of CO2-e during 2008–2012…) can be achieved.

3.29 Another approved project valued at up to $7.35 million was assessed by the AGO as being 'financially viable without GGAP funding' with an internal rate of return of approximately 22 per cent. This raises the question as to whether a grant is needed and further suggests that documentation of reasons for a particular decision is essential to explain the basis of the decisions being made.

3.30 The selection for the first two rounds in GGAP highlights that it would be appropriate for future programs to include improved documentation on reasons for decisions. This should include agency recommendations and an order of merit to enable Ministers to more readily consider the relative costs and benefits of project applications. This assists in ensuring that all the projects selected will be the best projects when judged against program objectives and selection criteria. In particular, the current GGAP assessment process could be strengthened through listing proposed projects in an order of merit based on numerical rating scale, weighted according to the significance of the criteria (example set out in table 3.4). This would improve overall transparency and is consistent with the House of Representatives Committee

on Environment Recreation and the Arts recommendation on the use of numerical ratings.[48]

Table 3.4

Numerical and ordinal rating scales

	Numerical Rating Scale					Ordinal Rating Scale				
	1 lowest	2	3	4	5 highest	low	low med	Med	med-high	high
Criterion 1					✓				✓	
Criterion 2		✓					✓			
Criterion 3			✓					✓		
Criterion 4				✓				✓		
Criterion 5					✓					✓

Source: Australian National Audit Office, *Better Practice Guide Administration of Grants*, ANAO, May 2002, p.42.

Recommendation No.4

3.31 In order to improve the rigour and transparency of the appraisal and selection process, the ANAO recommends that the AGO seek Ministerial approval to apply, where appropriate, across competitive programs:

(a) an order of merit rating scheme; and

(b) recommendations on selection that highlight projects that are most likely to achieve program objectives.

AGO response

3.32 Agree.

Timing and announcement of decisions

3.33 As a matter of good practice, it is preferable for the timing of announcement of all decisions on approved or unsuccessful projects to be together, or within a relatively short period of time after the decision. This approach enables applicants to know the outcome of their proposals as soon as possible so that they can pursue alternative courses of funding, if necessary.

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[48] The Parliament of the Commonwealth of Australia report of the House of Representatives Committee on Environment Recreation and the Arts (HORERA). *the Community, Cultural, Recreational and Sporting Facilities Program*, February 1994.

3.34 The ANAO considers that, for the timing of announcements in RECP, AFCP and GGAP, there is evidence of good practice being used. For example, the AGO informed unsuccessful parties in a timely manner as soon as possible after funding decisions were made. It is a general AGO practice to link announcements of successful projects with announcements by the applicants.

3.35 However, in GGAP Round 2, there was a significant spread of time in decision making due to the election in November 2001 (as discussed previously). Five projects were approved and announced in a short period in October 2001. Those projects that were unsuccessful were informed at this stage. Seven months later, Ministers approved a further two projects. The remaining unsuccessful applicants were then informed as to the result. The two successful projects were not publicly announced until July 2003, although GGAP Round 2 closed two years prior.

3.36 The ANAO recognises that there were constraints in the timing of decisions and announcements in GGAP Round 2 caused by the election and some changes in Ministries. However, the delay in the announcement of projects should, where possible, be avoided in future so that applicants can pursue alternative sources of funding.[49]

ANAO Conclusion

3.37 The ANAO recognises the technical challenges in appraising and selecting major projects designed to meet the objectives of greenhouse gas abatement and renewable energy technology. Appraisal has to be rigorous, particularly in relation to greenhouse gas abatement, as estimates of the level of abatement or the potential benefits from a particular technology, are not necessarily self-evident or well understood by applicants.

3.38 Overall, from the evidence examined during the audit, the appraisal of applications in the programs is rigorous and transparent. There are standard templates used that are explicitly linked to stated program objectives and criteria. The appraisal process includes specific consideration of value for money and the management of risks. However, there is also evidence of two anomalies. In both cases the AGO has taken steps to prevent a repeat of these circumstances.

3.39 In most programs examined, selection is generally sound and decision makers are provided with recommendations and an order of merit based rating scale (weighted according to the significance of the criteria). This provides a high degree of transparency as well as a clear context for the reasons for decisions. However, expanding this approach across all competitive programs would enable Ministers to more readily consider the

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[49] Australian National Audit Office, *Better Practice Guide Administration of Grants*, ANAO, May 2002, p.47.

relative cost and benefits of project applications. Clearer documentation of Ministers reasons for decisions in GGAP would assist in clarifying the weighting of relative strengths and weaknesses highlighted by the AGO in each project appraisal.

3.40 The overall conclusion is that the AGO has taken a sound, systematic approach to assessing the risks and opportunities in project appraisal and selection. There is evidence that improvements have been made over time as greater experience and knowledge has been gained in this complex and highly technical area. However, some opportunities remain to further strengthen administration in this area.

4. Management and Monitoring of Agreements

This chapter examines the management of funding agreements in the seven programs examined at the AGO. Well-drafted formal agreements are an essential requirement for effective management. Funding agreements need to be supported by financial and performance monitoring. Financial monitoring determines whether the efficiency and accountability procedures associated with the financial assistance have been complied with. Performance monitoring determines the extent to which desired outcomes are being achieved.

Nature and use of agreements

4.1 Well-drafted agreements are necessary for the effective management of grants. Experience has shown that better practice agreements are more likely to lead to improved results and minimise ongoing monitoring effort.[50] Funding agreements in particular are important as a control mechanism where public funds are committed to particular projects.

4.2 Agreements are in place between the AGO and respective parties for each of the programs considered. These agreements contain terms and conditions that cover payment, monitoring and progress reporting requirements and the rights and responsibilities of both parties. The agreements reflect input from legal advisers in the drafting process. The ANAO considers that these agreements are well designed and are appropriate for the specific design of each program.

4.3 There are particular project-specific areas where agreements could be strengthened. One area noted during the audit relates to the *Financial Management and Accountability Regulations 1997*, where agencies are required to assess and, where possible, manage foreign exchange risks.[51] Refer to Case Study C.

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[50] ibid p.49.

[51] Australian National Audit Office, Audit Report No. 10, 2002–03 *'Management of International Financial Commitments'*, ANAO, 2003.

Case Study C—Managing foreign exchange risk in agreements

In GGAP, one approved project (valued at nearly $11 million) involved importing large items of capital equipment. As a result of the fall in the Australian dollar in 2001, the commercial viability of the project was brought into question. The applicant then sought a funding increase of $4.5 million.

The AGO sought independent technical assurance that the funding increase was reasonable and there was no increase in the net present value of the project. Following this advice, Ministers approved up to $15.5 million for the project with additional funding approved being calculated on an agreed minimum exchange rate of $US0.50. The value for money in terms of cost per tonne of CO2-e changed from $4.92 to $6.40.

One Minister commented that 'perhaps it has reached the time to include a variation clause in relevant agreements. This means grants could be reduced where the costs have gone down because of currency reductions'. The ANAO recognises that only a sample of GGAP projects will involve importing capital equipment. Nevertheless, the value of the grant is materially significant and the AGO recognised the risk at the assessment stage. The AGO advised the Minister that 'the net present value of the project was very sensitive to exchange rates, the sale process of electricity and the cost of maintenance'. However, there was no clause in the agreement to recognise foreign exchange movements. As at November 2003, this project agreement is currently being renegotiated and no payments have actually been made.

The ANAO considers that it would be sound practice for future agreements of this nature to include reference to foreign exchange risk consistent with government policy.

4.4 A further issue with funding agreements (in GGAP, RECP and major RRPGP and AFCP projects) relates to the time taken to negotiate the project specific terms and conditions. For smaller, less complex projects under the AFCP, a timeframe of 3 to 6 months is not unusual between approval and finalisation of funding agreement.

4.5 For larger, more complex projects under GGAP, RECP and some major RRPGP projects, funding agreements can involve lengthy negotiations. In GGAP, negotiations for four major projects have progressed over a two-year period and have yet to achieve finalised funding agreements. The GGAP guidelines cite a 12 week period for successful applicants to enter an agreement with the government or if this is not possible, within 'a reasonable timeframe'. In RECP, the time taken to sign funding agreements between approval and finalisation of funding agreement ranged between four months and 15 months. For the seven major RRPGP projects, negotiations have generally taken up to 12 months.

4.6 The lengthy negotiation process for major projects are a result of a combination of the technical challenges required for results, as well as the substantial residual project risks being managed through the negotiable terms in formal agreements. Changing ownership and personnel in companies involved in projects and uncertainty about technologies and legal or financial issues, are particular challenges noted during the course of the audit. The nature of the technical challenges involved emphasises the importance of risk mitigation at the project selection stage. It highlights the importance of having a rigorous appraisal process, backed by an order of merit on project selection, when dealing with high risk, leading edge technologies operating in a highly competitive business environment.

4.7 The ANAO considers that, overall, the funding agreements provide a good control mechanism. The links between payments and the achievement of milestones is explicitly stated and gives the AGO a good degree of financial control. The area for improvement relates to tightening controls over project specific risk issues. While recognising that it may not be possible in all circumstances, consideration should also be given to reducing the time taken to finalise the funding agreements for major projects while maintaining the rigour of the process. It is a challenge requiring careful balance. The ANAO considers that one option might be to set a deadline for negotiations to be completed with particular applicants after which funds are reallocated to future funding rounds or alternative reserve projects, where possible.

Monitoring of program expenditure and payments

4.8 For programs with funding agreements spanning several years, controls over progress payments are an essential element of good management, as they help to avoid overpayment, fraud or misappropriation.[52]

4.9 The AGO has mechanisms in place to receive financial based progress reports under all programs. Program financial information is collated in monitoring information systems used by the AGO, including the agency wide 'Grants and Consultancies' database that is linked to the SAP financial system. The ANAO considers this system is well designed and provides a robust management tool. From the tests conducted through the audit, the system provides the AGO with good financial controls in the key area of actual payments made against approved funding limits.

4.10 The AGO has implemented good practice in making progressive payments against milestones for larger, longer-term projects that span several years in GGAP, RECP and for major projects in AFCP and RRPGP. Milestones tend to be for outputs, such as capital works or purchase of large items of equipment, as opposed to greenhouse gas abatement or other key outcomes.

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[52] Australian National Audit Office, *Better Practice Guide Administration of Grants*, loc.cit.

This is understandable as results are not usually possible until capital works are completed.

4.11 Table 4.1 outlines the program expenditure till 30 June 2003. Actual expenditure to date is 23.4 per cent of the original budget estimates. The original budget estimates were ambitious given the long lead times and complexity of projects and the importance of managing risks through milestone payments. These original budget estimates have subsequently been revised and re-profiled to be more aligned with the scheduled expenditure against milestones.

Table 4.1

Total Program Expenditure till 30 June 2003

	Original Budget estimate for programs	Actual expenditure til 30 June 2003 [A]	*Actual expenditure as a per cent of original budget estimate*
GGAP	400.0	50.1	*12.5*
PVRP	31.0[B]	30.6	*98.7*
RRPGP	264.0[C]	35.7	*13.5*
RECP	55.6	35.1	*63.1*
AFCP	75.0[D]	19.6	*26.1*
Challenge	27.1	25.1	*92.6*
REEF	21.0[E]	8.2	*39.0*
Total	**873.7**	**204.4**	***23.4***

[A] This amount includes administrative expenditure. AGO program allocations are 'levied' to meet the administrative costs required to deliver the programs.

[B] This amount has a subsequent revised estimate of $34.6 million

[C] The original budget for RRPGP was determined by the estimate of relevant Diesel Fuel Excise to be paid by public power generators in the years 2000-01 to 2003-04 as at 1999. The Government has subsequently revised the estimate to $179.9m based on estimates in 2000-01.

[D] This amount has a subsequent revised estimate of $71.4 million.

[E] This amount has a subsequent revised estimate of $19.5 million.

Source: ANAO based on information provided by AGO in November 2003

4.12 As outlined in Table 4.1, actual expenditure overall to 30 June 2003 is low compared to original budget estimates. However, commitments made through funding agreements, partnership agreements with the states and territories and the MOU for REEF total $619.8 million. This represents 71.1 per

cent of original budget estimates.[53] This also includes commitments such as the $45.2m reallocated from GGAP approved by Ministers (but not included in this table) for the development of new policy and other related initiatives. The AGO obtained legal advice that this reallocation was within appropriations.

4.13 The effective use of milestone payments as a source of financial control is an example of good practice by the AGO. When progress has been slow or unsatisfactory, the AGO has withheld milestone payments until requirements have been met. For example, in RECP (as at end of April 2003), milestones for 30 projects had been delayed. The average delay was five months.

4.14 However, there is some opportunity to further strengthen the design of milestones in terms of more effectively linking them with program outputs. In the AFCP, one example was noted during the audit where payments were made against milestones that ultimately did not provide a greenhouse benefit, although there may have been an air quality improvement. This example is discussed in Case Study D.

Case Study D—The importance of linking milestones to program results

A company was successful in securing an AFCP grant to purchase 103 new dedicated CNG buses to replace a diesel fleet. The original grant application indicated that the project would result in a 692 tonne CO_2-e reduction in greenhouse gases per year, as well as air quality benefits. On this basis, the AGO agreed to provide $1.75 million financial assistance payable on the completion of three milestones.

The final milestone report submitted to AGO in June 2002 demonstrated that the company had completed all milestones required by the AGO for full payment of the grant. However, emissions testing conducted as part of the report showed that emissions of greenhouse gases from the CNG bus (997.3 tonnes of CO_2-e) were higher than those from the comparable diesel bus (864.8 tonnes of CO_2-e). Further technical assessment in September 2002 indicated that the use of AFCP funds had not resulted in any greenhouse saving.[54]

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[53] Refer to Appendix 2.

[54] Information obtained from project application form and assessment.

Legal advice was sought by the AGO to determine whether they were obliged to make final payment where all milestones were complied with, but there was no demonstrated greenhouse benefit. Advice indicated that the AGO was obliged to pay the final payment. At this stage in the program, there was no specific obligation in the funding agreement or in the AFCP guidelines that covered the circumstance where vehicles fail to deliver greenhouse emissions improvement.

The ANAO considers that this case study provides an example of where milestones could be more effectively linked to project outcomes to demonstrate that they are assisting in meeting the program's objectives.

4.15 In order to avoid this situation in the future, the ANAO considers it would be good practice to consistently retain a small but significant portion of the grant funds, linked to the greenhouse gas abatement component (or other key project outcomes), until the final report has been acquitted. This is done in some programs, for example under the RECP where 20 per cent of the grant is held until receipt of the final report. It provides a more rigorous way to manage the residual risk of larger, materially significant projects not achieving greenhouse gas abatement or other key outcomes.

4.16 A necessary financial control is that grant acquittal procedures are in place to provide an assurance that the funds have been spent for their intended purpose. The ANAO found that all AGO grant programs have acquittal procedures. For GGAP, RECP and AFCP, these acquittal procedures are in the funding agreements with grant recipients. There is evidence that acquittal procedures are monitored and actively followed up. For RRPGP and PVRP, the states are required (as part of the partnership agreement) to provide financial statements to the AGO. For these state managed programs, certified annual reports are submitted to the AGO. While a large number of projects (particularly the larger projects funded through programs such as GGAP) are yet to be completed, the AGO has good systems in place to provide an assurance that funds will be spent for their intended purposes.

Monitoring of performance

4.17 Monitoring performance is crucial for programs spanning several years. Agencies need an assurance that programs are on track, and that there is early warning of emerging risks to program objectives.

4.18 Progress reports containing performance data are received by the AGO for each program considered in various forms:

- project based progress reports linked to milestones (GGAP, RECP, AFCP, major RRPGP projects);
- annual progress reports from members (Challenge);
- annual progress reports from states and territories as well as more frequent summaries of progress, on a weekly or monthly basis (sub-program RRPGP rebates, PVRP); and
- annual and six monthly progress reports from AusIndustry (REEF).

4.19 Performance data extracted from different program reports is used for accountability and management purposes. While different programs use a variety of different systems (such as spreadsheets or management databases), the AGO is able to extract meaningful performance data that can be aggregated to output group level.

4.20 The ANAO briefly examined the progress of programs to date. This is discussed in the two sections below.

Programs primarily focused on greenhouse gas abatement

4.21 Achieving greenhouse gas abatement is a core outcome for the AGO and reflects commitments by the Australian Government to limit greenhouse gas emissions to 108 per cent of 1990 emissions over the period 2008–2012.

Greenhouse Gas Abatement Program (GGAP)

4.22 GGAP is the key program designed to achieve greenhouse gas abatement during the Kyoto period to 2008–2012. The monitoring of performance in GGAP indicates at this stage, that it is too early to tell if the overall results are likely to be achieved, as abatement is not anticipated until the first Kyoto commitment period of 2008–2012. Few projects are sufficiently advanced to produce results. Most attention has been on finalising agreements.

4.23 Projections indicate that the program could abate 51.5 Mt of CO_2-e during the 2008–2012 Kyoto period. From Rounds 1 and 2 alone, there is approximately 30.2 Mt of CO_2-e abatement based on technical assessments for the eighteen initially approved projects. However, one project has withdrawn and at this stage three projects may not proceed. A further project is being substantially revised with the expectation of improved greenhouse gas abatement.

4.24 While eventual results remain uncertain at this stage, there has already been some actual abatement to date in an approved GGAP project. See case study E.

Case Study E—Measuring of abatement in a GGAP project

Hydrofluorocarbons (HFCs) are synthetic greenhouse gases that are used in the refrigeration and air conditioning industries as a replacement for more significant ozone depleting substances. HFC's are, on average, some 2 000 times more potent as greenhouse gases than CO_2. HFCs are currently the most common refrigerant in Australia for air conditioning and refrigeration systems. Estimates put emissions at 2.3 Mt in 2001 with projected growth of a further 17.4 Mt CO_2-e in 2010. Almost 80 per cent of emissions of HFC's occur when the refrigeration or air conditioning equipment is originally charged with gas, leakage during operation or servicing and at disposal. There are currently few restrictions on how gases are used.

A GGAP project has received funding of up to $3.56 million for two parts including (a) a national training and certification program and (b) extensions of the recovery programs to reclaim and destroy used HFCs. The project aims to enhance best practice to avoid the venting or release of HFCs into the atmosphere. It is estimated that total abatement for this project will be 0.7 Mt of CO_2-e at a cost of $5 per tonne of CO_2-e.

The company responsible for the training and certification aspect on the project as at the end of August 2003 has certified 3607 technicians on the program. While quantitative abatement from the certification scheme is difficult to measure, the project has raised awareness and promoted industry best practice as a means of reducing emissions.

The company undertaking the recovery, reclamation and destruction of HFCs has already achieved definite greenhouse gas abatement, with results as at 30 June 2003 equivalent to 35 750 tonnes of CO_2-e.[55] The funding agreement with the AGO required a quantitative amount of HFCs to be recovered for each milestone payment.

New legislation before Parliament (the Ozone Protection and Synthetic Greenhouse Gas Amendment Legislation Bill) aims to significantly reduce emissions from this sector. Abatement projected for the proposed legislation is estimated at 5.8 Mt of CO_2-e.[56]

The ANAO considers this to be an example of where good practice has been implemented by the AGO in monitoring progress and requiring the applicants to have proven greenhouse gas abatement linked to the achievement of project milestones.

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[55] This is 24.2 tonnes of HFCs converted to Co2-e.

[56] The Australian Greenhouse Office, *National Greenhouse Gas Inventory 2001*, loc.cit.

4.25 Noting the positive progress being made in the above case study, there are substantial risks for the program. These will require attention if the necessary results are to be realised. Risks include the time required for major project implementation (that is between three to seven years). The long lead times for results means that there are formidable challenges in realising all of the abatement envisaged from the program during the Kyoto period 2008–2012. Any substantial delays from Round 3 projects will further impact on the actual abatement envisaged for the program during this period 2008–2012. There have also been significant technical challenges to be overcome in many of the projects before abatement can be achieved. For example, the abatement achieved from two ethanol projects funded from Round 1 will be largely dependent on the uptake of ethanol-blended fuel as well as the source of ethanol.

4.26 Overall, monitoring mechanisms in GGAP are in place and provide a sound basis for assessing the risks to the achievement of results. The approach will be critical to providing early warning on projects that are 'at risk' in the lead up to the Kyoto Period 2008–2012.

Greenhouse Challenge (Challenge)

4.27 The Challenge has, as the first of its three objectives, a focus on greenhouse gas abatement through voluntary agreements with industry. The AGO monitors membership and has targets in place as established in the 1997 STF package. This includes 500 members by 2000, and 1000 members by 2005. The year 2000 membership target was achieved, and the 2005 membership target is achievable with 806 members as at 30 June 2003.[57]

4.28 The monitoring of the Challenge includes collecting data on the greenhouse actions of the members. Verification of this data has been a very important part of confirming the results from the program. This issue was a key focus in the inquiry from the Senate Committee. Case Study F summarises the relevant recommendations from the inquiry for the Challenge program.

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[57] These membership numbers were provided by the AGO in July 2003.

Case Study F—Responding to agreed Parliamentary recommendations

In its 2000 inquiry, the Senate Committee was positive of the program's achievements in raising industry awareness of climate change and expertise in emissions accounting and greenhouse gas abatement. However, it was concerned that 'there was some question as to whether the Challenge has achieved significant emissions reductions over and above what would have been achieved through a BAU approach accounting for productivity and efficiency improvements'.[58]

The Senate report recommended (amongst other things) that:

- 'all companies be required to verify assessments of Challenge program emissions savings, and to publicly disclose details'. (recommendation 87)
- 'any changes to the level of forecast emissions savings by Challenge Program members made after the signing of Cooperative Agreements be publicly disclosed' (recommendation 88); and
- 'the Challenge Program give greater attention to the development of sectoral analysis and reporting. This should be consistent with international reporting guidelines' (recommendation 92).

The Australian Government agreed to these three recommendations. In relation to the first recommendation, the AGO has indicated to the ANAO that 100 per cent verification each year would be a significant cost on industry and government. However, a program of rolling verification has been introduced across the life of the program. So far, a total of 60 Challenge members have been verified once (using a stratified random sample), out of the current 806 members (7.4 per cent). While the ANAO considers that the results of this approach should, in principle, enable the AGO to draw valid conclusions, it also suggests that there is some way to go to achieve 100 per cent verification even over the life of the program. In these circumstances, the AGO may need to give consideration to the appropriate sample size over time to provide an assurance as to the robustness of the overall verification process.

In relation to the second recommendation, forecast emissions savings by members are not publicly disclosed, although aggregate abatement is reported as part of annual reporting requirements. Some members view confidentiality as being crucial to their competitive advantage and are reluctant to disclose their greenhouse gas emissions. In relation to the third recommendation, attention to sectoral analysis has been improved since 2000 through information provided on the AGO website.

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[58] The 2002 Evaluation of the Challenge also noted that 'for larger, high emitting companies, it is highly likely that a substantial amount of the abatement reported by program members would have occurred irrespective of program membership'.

The ANAO considers that, if the Australian Government agrees to recommendations from a Parliamentary committee, there is an obligation on the part of an agency to implement those recommendations. If circumstances are such that it is not possible to meet the obligations, then the matter should be specially reported back to Parliament in the agency's annual report. The ANAO notes that this has not been done to date in relation to recommendations 87 and 88.

4.29 Following on from the Senate report (Case Study F), the key outstanding issue in relation to the program is whether the greenhouse gas abatement claimed from the Challenge is an accurate reflection of what has been actually achieved as a direct result from the program. As noted in Chapter 2, the original design of the Challenge was not conducive to measuring abatement over and above BAU.

4.30 Monitoring by the AGO indicates that current abatement from 30 June 2001 is estimated at over 20 Mt of CO_2-e per annum.[59]. This figure has been revised down as part of continuous improvement in refining the abatement reported under the Challenge. In particular, the AGO in its 2003 Projections discounted claimed abatement to account for BAU as well as overlaps with state programs. However, 'over 20 Mt of CO_2-e' is a broad assessment of performance. This could be improved through further refining the discount rate of abatement to reflect a more specific level of abatement achieved. The ANAO notes that in regard to the greenhouse gas abatement objective of the Challenge, the AGO could make more explicit the actual greenhouse benefits from the program over and above BAU.

4.31 A further consideration relates to how the Challenge has achieved the other program objectives such as continuous improvement and knowledge management by members. A phone survey conducted by the AGO in 2002 found that 76 per cent of the 92 respondents to the survey indicated that their organisation could potentially improve their greenhouse gas abatement performance if provided with more 'member support services' such as workshops, on-ground support and technical information. Another study from Monash University has indicated that few of the top 200 Australian companies have included greenhouse gas mitigation within their environmental management systems.[60] Noting that only 24 of these top 200 companies are members of the Challenge, this suggests that more could be done in industry to encourage continuous improvement and knowledge management in relation to greenhouse issues.

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59 Australian Greenhouse Office, *Annual Report 2002–03*, AGO, 2002, p.27.

60 S&P/ASX 200 companies have integrated energy and greenhouse gas mitigation into corporate environmental management systems and only 18 S&P/ASX 200 companies have publicly disclosed commitments to reduce energy use or greenhouse gas emissions.

4.32 Overall, the monitoring under the Challenge is sound given the constraints on a voluntary program. However there are opportunities to strengthen the results from the program by focusing on further continuous improvement in industry and refinement of the calculation of abatement.

Alternative Fuels Conversion Program (AFCP)

4.33 The AFCP has a target of supporting the use of alternative fuels in approximately 800 buses and 4 000 trucks in each of the four years of the program.[61] As at June 30 2003, performance monitoring indicates that only 568 buses and 30 trucks have been funded for the life of the program. As a result, any abatement or air quality achieved to date is very minor. The issues associated with program design and expenditure were discussed earlier in chapter 2.

4.34 A review of the program convened in late 2001 highlighted some of these issues to the AGO. Following completion of the review in August 2002, the Minister for the Environment was advised that the program had not delivered its expected greenhouse gas savings due to a lack of available, proven gas-vehicle technology and a lack of demonstrated greenhouse gas reductions from the available vehicles (as discussed in chapter 2). The 557 buses funded at that stage had not achieved consistent reductions in emissions with results ranging from a 16 per cent reduction to a 16 per cent increase in greenhouse gas emissions. The 27 trucks funded at that date was well below target because of a lack of vehicle options that had a demonstrated greenhouse gas saving.

4.35 Following the results of the review and industry consultations, pilots have commenced in late 2003 with a view to refocusing the program. The recent introduction of new technology for engines and conversions also introduces the potential to have greenhouse savings and air quality benefits in the future. Overall, the monitoring of the AFCP by the AGO has highlighted the shortcomings in the program and has provided the basis for refocusing the program to better achieve the stated objectives.

Programs focused primarily on renewable energy

4.36 The performance of renewable energy programs is particularly important, as evidence suggests that renewable energy as a percentage of total energy production has been progressively falling over the last 15 years. In 1987–88 it accounted for 11.5 per cent of power generation. In 2002–03 it

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[61] Hon. J Howard MP (Prime Minister), *Media Release: 'Changes to the Goods and services tax'*, 1999, p.9. The media release says that 'the program will encourage the conversion of 800 buses and 4000 commercial vehicles a year over the first four years'.

accounted for just 8.8 per cent.[62] The Renewable Energy Action Agenda (REAA) agreed between government and industry in 2000 aims to achieve a sustainable and internationally competitive renewable energy industry with annual sales of $4 billion by 2010.

Renewable Energy Commercialisation Program (RECP)

4.37 Monitoring of the RECP has focused on progress against milestones. After six funding rounds, all program funds have been fully committed. As at 30 June 2003, 14 RECP projects are complete (for example, see Figure 4.1).

Figure 4.1

$1 million in RECP funding assisted in providing renewable energy to the Queen Victoria Markets in Melbourne

Source: Melbourne City Council

[62] Australian Business Council for Sustainable Energy EcoGeneration Magazine, *Assessing our Renewable Energy Industry,* Oct-Nov 2003, pp 10–13. Other research also supports these findings. The Australian Bureau of Statistics has found that between 1973 and 1998 there was an upward trend in non-renewable energy production in Australia while the production of renewable energy has remained relatively stable. ABS Year Book, Australia 2003, p.463.

4.38 However, it will take many years to determine whether the commercialisation of projects is successful in terms of achieving longer-term abatement or in supporting the REAA. This reflects the long lead times required for technology uptake and diffusion. The program evaluation noted that it was too early to tell the extent to which the RECP had contributed to commercialisation of many innovative technologies. Many of the projects were proceeding much more slowly than was envisaged in the project submissions.

4.39 Where projects have completed all milestones, program team members have sought to keep in contact with grant recipients to ascertain progress to outcomes concerning abatement. This helps to address the difficulty of outcomes occurring outside of the funding cycle.

4.40 As described in Table 4.2, RECP grants have covered commercialisation in a wide range of the renewable industries. Many of these projects have the potential to support regional development, salinity amelioration, and waste reduction and exports.

Table 4.2

Technologies funded under RECP

Technology	Number of Projects	Percentage of Total
Solar	15	29
Enabling [A]	7	14
Biomass [B]	14	27
Solar Thermal [C]	9	18
Geothermal HDR [D]	2	4
Wave	1	2
Hydro	1	2
Wind	1	2
Tidal	1	2
Total	**51**	**100**

[A] Enabling refers to systems that support solar photovoltaic systems in remote areas

[B] Biomass Projects involving power or energy conversion from organic materials

[C] Solar Thermal involves space or process heating through solar technology

[D] Geothermal HDR involves power generation based on hot dry rock technology

Source: Evaluation of Renewable Energy Commercialisation Program (2003) p.3.

4.41 One further objective of RECP is to 'offer the prospect of significant abatement of greenhouse gas emissions over the longer term'. Monitoring against this objective indicates that for the financial year ending 30 June 2003 for the 14 projects completed so far, approximately 380 000 tonnes of CO_2-e has been abated. This abatement has mainly been achieved from the stationary

energy, transport and waste sectors. The projects in total are anticipated to abate in the range of 4.9 Mt to 6.1 Mt of CO_2-e for 2010.[63]

4.42 Overall, the ANAO considers that monitoring for the RECP is sound. It is particularly difficult to determine whether projects will be ultimately successful. However, the AGO has mechanisms in place to monitor projects beyond completion of funding.

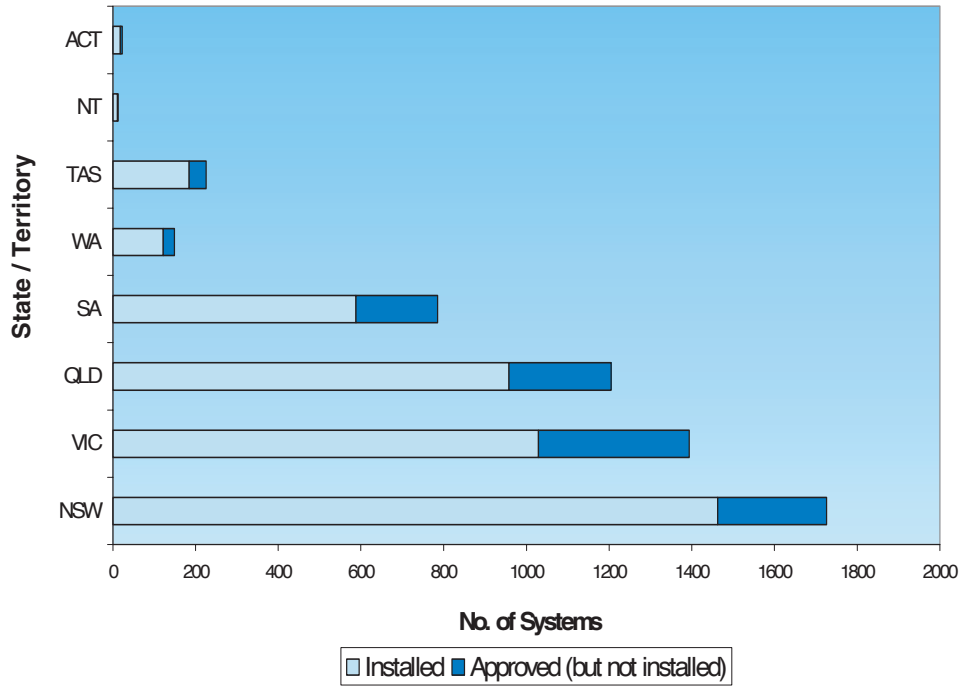
Photovoltaic Rebate Program (PVRP)

4.43 Monitoring of the PVRP is linked to the regular reports provided under the Partnership Agreements by each state or territory. The AGO monitors progress on a weekly basis. As at end June 2003, a total of 5 522 photovoltaic units have been approved for funding with 4 374 of these units installed. Figure 4.2 shows the number of photovoltaic units approved, and those installed in each Australian jurisdiction.

[63] This figure is the conservative revised estimate by the AGO. Original estimates by program applicants suggested that abatement would average 17.7 Mt of CO_2-e for the period of 2008–2012. In revising this estimate, the AGO concentrated on the year 2010.

Figure 4.2

Progress of the PVRP as at 30 June 2003



	ACT	NT	TAS	WA	SA	QLD	VIC	NSW
Installed	18	11	185	122	588	958	1029	1463
Approved	5	2	41	27	197	247	365	263
Total	23	13	226	149	785	1205	1394	1726

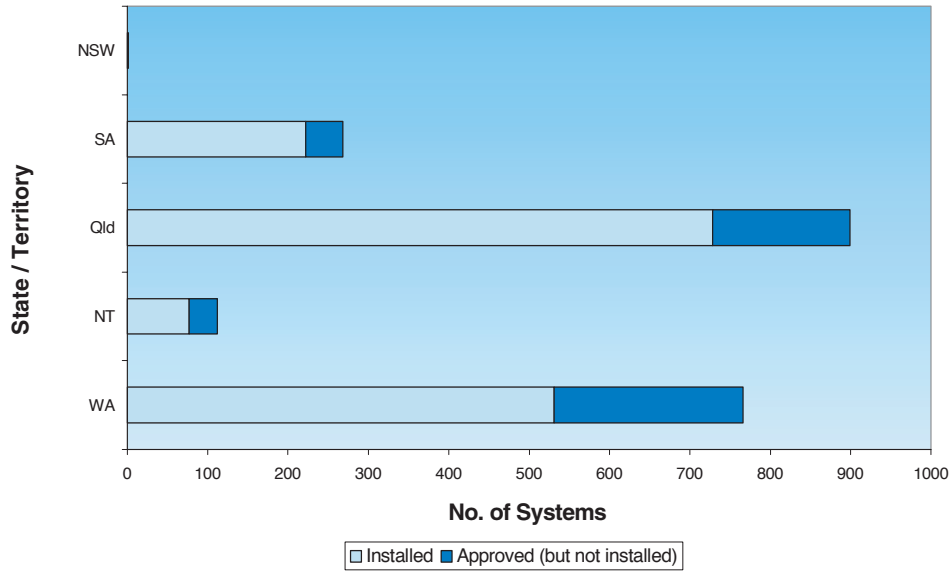
Source: ANAO based on information provided by the AGO

4.44 In terms of monitoring against the objectives of the program, the program has encouraged the long-term use of photovoltaic technology through the subsidies provided. However as discussed in chapter 2, it is not clear as to the extent this has been successful. The evaluation of the PVRP noted that half of respondents from a customer survey said they would have proceeded with the installation of a photovoltaic system irrespective of the rebate. However, the survey also noted that approximately half the total respondents would have installed a smaller system without the rebate. Nevertheless, in terms of the objective relevant to greenhouse gas abatement, the PVRP program is not significant in its impact. In total, the program is expected to achieve abatement of 8 300 tonnes of CO2-e annually. To date, expected abatement for installed units so far is estimated at approximately 7 628 tonnes of CO2-e annually.

4.45 Monitoring of the RRPGP is also linked to reports provided by the states and territories under the partnership agreement. For sub-programs, the AGO monitors progress on a monthly basis. As at 30 June 2003, the total amount of rebates approved for the sub-program is 2 046 for the installation of renewable remote generation power systems, with 1 559 of these units installed. Figure 4.3 shows the number of renewable generation systems pre-approved and installed in remote off-grid areas under the RRPGP in each eligible jurisdiction.

Figure 4.3

Progress of the RRPGP Sub-Program as at 30 June 2003



	NSW	SA	QLD	NT	WA
Installed	1	222	728	77	531
Approved	0	46	171	35	235
Total	1	268	899	112	766

Source: ANAO based on information provided by the AGO

4.46 The RRPGP also has a major project element, with seven major projects approved involving funding to wind, tidal, and PV projects.[64]

[64] As previously outlined, major RRPGP projects refer to those where the rebate is greater than $500 000 where the AGO is responsible for funding assistance.

4.47 In terms of monitoring against the objectives of the program, the above figures indicate that the program has had some impact. However, the extent to which this is significant in 'increasing the uptake of renewable energy technologies in remote areas of Australia' and 'assisting in the development of the renewable energy industry' is not yet clear. In terms of the objective of 'leading to long-term greenhouse gas reductions', monitoring indicates that there has been some abatement although this is not significant. As at June 30 2003, the estimated abatement from the installed units under the sub-programs has been 11 654 tonnes of CO_2-e annually. From the RRPGP major projects approved to date, the estimated annual abatement has been 80 000 tonnes of CO_2-e per annum (from the completion of the seven projects).

4.48 Overall, the monitoring of the PVRP and RRPGP is largely devolved to the states and territories and reflects the commitments entered into in the agreements. The data provided by the states and territories enables the AGO to accurately calculate the units installed under the program.

Renewable Energy Equity Fund (REEF)

4.49 Monitoring of REEF is through progress reports provided by AusIndustry under the Memorandum of Understanding (MOU) with the AGO. Information from the progress reports indicates that REEF has invested in six companies. Table 4.3 outlines the different investment made to September 2003.

Table 4.1

REEF Investments as at September 2003

Company	Funds Invested ($m)	Commonwealth Funds Invested ($m)
A	0.3	0.2
B	3.0	2.0
C	1.8	1.2
D	0.5	0.3
E	3.0	2.0
F	0.8	0.5
Management Fee	2.3	1.5
Total	**11.7**	**7.8**

Source: AusIndustry, Department of Industry, Tourism and Resources

4.50 In October 2002, the fund manager divested its investment from one company. If this investment were included the total approved projects would increase to seven. Capital has been returned to investors from the divestment

in one company with a 9.42 per cent return for the period 2000–2002.[65] The Commonwealth received $336 372 from this divestment. At this stage of the program it is too early to tell whether the commercialisation of the projects has been successful or not. However, while progress has been slower than anticipated, a core investment package is in place. As well, monitoring is sufficient to indicate what progress is being made towards the program objectives.

ANAO Conclusion

4.51 Funding agreements across GGAP, RECP, and major RRPGP and AFCP projects are well drafted and appropriate to the circumstances for each program. The links between payments and the achievement of milestones are explicitly stated. This gives the AGO a substantial degree of financial control to manage emerging risks.

4.52 The timeframes for the negotiations for funding agreements in larger projects have, in some cases, resulted in periods of up to two years before agreements are in place. This increases the risk that projects will not achieve their objectives. The ANAO recognises the challenges in the negotiations over complex technical issues and the substantial residual risks remaining with these projects. While recognising that it may not be possible in all circumstances, consideration should be given to reducing the time taken to finalise funding agreements for major projects while maintaining the rigour of the process.

4.53 The monitoring of program expenditure has been assisted by the financial management system within the AGO. The system is sound and provides a good mechanism to record program financial information in terms of actual payments against approved milestones and to address project underperformance. Actual expenditure to 30 June 2003 has been low compared with original budget estimates, reflecting payments spread over many years.

4.54 Performance monitoring to date has been thorough and given the necessary priority. It is too early to tell if programs such as GGAP, RECP, and REEF will achieve their objectives in the longer term. The AFCP has had major constraints in achieving its targets for heavy vehicle conversions. Substantial risks remain—particularly in GGAP where some difficulties remain over some projects funded from Rounds 1 and 2. Further abatement can be expected from the 3rd round of funding that was not finalised at the time of the audit. However, the long lead times in establishing projects and achieving abatement

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[65] REEF was announced in 1997. However the program itself was not operational until 2000 following the completion of the inter-agency memorandum of understanding and the tender for the fund manager.

suggest that substantial efforts will be required prior to 2008–2012, if the projected results are to be realised.

4.55 The Greenhouse Challenge may produce significant abatement in the Kyoto period, but to what extent this is beyond BAU is not clear. Nevertheless, the AGO has improved the methodology for measuring abatement that recognises business as usual. However, the ANAO considers that the actual level of abatement claimed to date through the program needs further consideration and refinement to reflect a more accurate picture of the program's achievements.

4.56 Programs managed through the states and territories have sound partnership agreements that provide for monitoring through regular progress reports. Data from the monitoring suggests that some degree of industry development has been achieved. However, to what extent the longer-term use of renewable energy technology has been encouraged is not yet clear. It is unlikely that the impact of the PVRP will be substantial or cost effective in the short to medium term.

4.57 Overall, the AGO has good systems in place to effectively manage agreements with the use of legal agreements, and a sound financial and performance-monitoring framework. However, there is opportunity for further refinement and to build on lessons learned for the future.

5. Evaluation and Reporting

This chapter examines the evaluation and reporting processes for the programs examined in the audit. Evaluation is considered integral to the program in order to provide a detailed progress report and highlight any lessons learned. The results of evaluations should be linked to public reporting to demonstrate the achievements, as well as the challenges, remaining for the future.

Evaluation of programs

5.1 Periodic evaluation can contribute to improved program management and lead to more informed decision-making; facilitate better use of resources; and refined objectives, and enhance accountability.

5.2 The AGO has implemented good practice in demonstrating a strong and consistent focus on evaluation across all AGO programs. A schedule for program evaluations has been built in at the design stage. Of the seven programs examined at November 2003, evaluations have been conducted for six programs. A review is underway for the remaining program.[66]

5.3 The evaluation methodology is consistent across programs addressing appropriateness, efficiency and effectiveness of programs. The reports are balanced, noting shortcomings as well as achievements. In some cases, the long lead times for results in programs made it difficult to comment on results achieved. Some common areas for improvement from the program evaluations include, the need to address the potential risk of overstating abatement, and improving program coordination and targeting. However, the evaluations noted some positive multiplier effects for job creation, and some examples of innovative and commercially viable technologies as well as new companies being formed around renewable energy projects.

5.4 The evaluation process provides a sound platform for strategic planning and setting or revising appropriate milestones for performance. The ANAO considers that the current development of the Climate Change Forward Strategy provides the ideal opportunity for the Australian Government to take formal steps to respond to the findings of the evaluations and make adjustments as necessary.

5.5 Consideration also needs to be given to how stakeholders can be better informed of the findings of evaluations. Currently, the 1999 evaluation of the Challenge is available on the AGO website. At the time of the audit, no other

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[66] This is a significant improvement from the earlier audit report of the (then) Department of Primary Industry and Resources. Recommendation number 12 of this report was that the department 'ensure that programs are periodically evaluated and reoriented where needed in a timely manner'. Australian National Audit Office Audit Report No.32, 1992–93, *'Implementation of an Interim Greenhouse Response'*, ANAO, p.59.

evaluation has been made publicly available. In some cases, there may have been reasons concerning commercial-in-confidence matters or sensitivities in inter-governmental relationships. There are also sensitivities concerning Budget and Cabinet processes that need to be considered prior to any release. The ANAO considers that the evaluations provide valuable lessons learned as well as being important documents for accountability and transparency. While noting the potential sensitivities, the ANAO considers that the AGO should include at least key findings and executive summaries of evaluations on the AGO website following any Budget or Cabinet processes.

Public reporting on results

5.6 Good governance requires that an agency have a structured and regular system of performance monitoring and reporting. This system should be aligned with an agency's outputs and outcomes framework and generate information that is appropriate for internal management purposes as well as external reporting requirements such as the annual report. Effective public reporting should provide Parliament and other stakeholders with sufficient information and analysis to make a fully informed judgement on performance. As noted in the formal guidelines, a good annual report is one that cogently provides information about the actual performance of agencies and forecasts of future needs and expectations.[67]

5.7 Annual reporting to Parliament by the AGO (to date) has largely been focused on inputs and activities. The AGO reports against performance indicators linked to output groups. Useful data is included in areas such as the number and value of grants given over the financial year. Qualitative data on stakeholder surveys and some limited information on evaluations undertaken have been included.

5.8 However, annual reports prepared by the AGO have a number of shortcomings. In particular, where targets are in place for programs they have not consistently been reported against. Further, trends and changes over time are not always obvious and risks and challenges are not well articulated. These matters are discussed further below.

5.9 Where targets do exist, there is a lack of actual program performance data to illustrate progress (or otherwise) against the target. As an illustration, the AFCP has particular quantitative targets in terms of 800 buses and 4 000 trucks to be converted (or purchased) in each of the four years of the program. The 2002–03 annual report reports the 568 buses and notes that as a result, Australia's fleet of natural gas buses had increased by close to 150 per cent since the program began. However, it does not report on performance against

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[67] Department of the Prime Minister and Cabinet, *Requirements for Annual Reports for Departments, Executive Agencies and FMA Act bodies*, June 2003. This was approved by the Joint Committee of Public Accounts and Audit under subsections 63(2) and 70(2) of *the Public Service Act 1999.*

the original target and could give the reader a misleading impression about the achievements of the program. The actual performance on the number of trucks converted (or purchased) is not reported.

5.10 The annual report does not provide sufficient illustration of trends and changes over successive years. While the annual report links the programs with output groups as required, there is a lack of year-by-year comparisons on performance. This is particularly important because of the long lead times involved in achieving results of between three and 13 years, as well as for the revised results flowing from the verification process. For example, comparison of the results from the Challenge over successive years leave the reader somewhat confused as to what level of abatement has been realised. This is outlined in Table 5.1.

Table 5.1

Percentage change and number of tonnes of emissions abated Challenge 1999–2000 to 2002–2003.

Percentage change and number of tonnes of emissions abated	Result
1999–2000 AGO annual report	By the end of 2000, industrial end-user participants in the Challenge would reduce greenhouse gas emissions by 23.4 million tonnes of CO_2-e per year. This represents a reduction of 16 per cent using a static efficiency measure.
2000–2001 AGO annual report	The forecast abatement for the Challenge Program for 2000 was estimated at approximately 23 Mt CO_2-e savings.
2001–2002 AGO annual report	As at the end of 2001–02, the cumulative effect of actions reported by Challenge members since commencement of the program is 19.2 Mt CO_2-e per year.
2002–2003 AGO annual report	At the end of 2002–03, as a result of actions taken, Challenge members had reported total annual abatement of more than 20 Mt CO_2-e.

Source: Extracts from AGO annual reports

5.11 In order to provide a balanced and complete report to Parliament, the ANAO considers that it would be highly desirable for the AGO to include details of significant financial or operational risk and arrangements in place to manage risks, as well as program challenges, and key lessons learned from the program evaluations. For example, the periods experienced in successfully negotiating funding agreement with some grant recipients in GGAP, are not adequately addressed in the report. Similarly, the challenges in delivery of programs, such as AFCP, could be further discussed in terms of the constraints and what action is being taken.

5.12 The ANAO considers that it would be desirable, over time, for the report to form a progress report on the AGO's achievements, preferably at

whole-of-agency level. Currently, while the Minister has indicated that measures will eventually produce 67 Mt CO_2-e of abatement annually, the annual report provides no basis to demonstrate progress towards this target from the programs being funded. Refining the annual report to reflect these considerations would enable Parliament to make a more informed judgement on performance of the AGO programs.

5.13 The AGO may also benefit from considering the better practice principles and examples illustrated in the ANAO/Department of Finance and Administration guide designed to assist agencies in promoting accountability and transparency in their annual performance reporting.[68]

Recommendation No.5

5.14 In order to enhance public reporting through the use of performance information to improve the quality and consistency of reports, the ANAO *recommends* that AGO annual reports include:

(a) consistent reporting against performance targets for programs;

(b) analysis of significant trends and changes over time; and

(c) analysis of identified challenges, risks and priorities.

AGO response

5.15 Agree.

ANAO Conclusion

5.16 The AGO has a detailed evaluation schedule for all programs. The commitment and application shown by the AGO to evaluation is consistent with better practice and a good model for other agencies. However, the evaluations are generally not available to the public or interested stakeholders. While noting the sensitivities and constraints, providing at least summary advice on the results of the evaluations would enhance transparency and accountability of the AGO.

[68] This Better Practice Guide is due to be tabled in Parliament in the Autumn session of 2004.

5.17 The annual reporting to Parliament to date has largely been focused on inputs and activities. This is necessary but not sufficient to enable Parliament to make an informed judgement on performance. There is significant scope for improvement for example, by including reporting against program targets, analysis of any significant trends and changes over time, and analysis of remaining challenges, risks and priorities. This would enable the AGO to report more effectively against its output groups. It would also provide the Parliament with a more complete and informed picture of what is being achieved, what progress is being made in key areas, and what challenges remain.

Canberra ACT
5 March 2004

P. J. Barrett
Auditor-General

Appendices

Appendix 1: Objectives and overview of each program audited

1997 Safeguarding the Future Package	
Greenhouse Challenge Program (Challenge)	
Description:	A voluntary industry program to reduce greenhouse gas emissions, drive continuous improvement and enhance knowledge and understanding of cost effective ways of managing greenhouse gas emissions.
Value and period:	$ 27.1 million from STF for the period 1998/99 to 2003/04
Objectives:	• achieve maximum practicable greenhouse abatement performance by members; • drive continuous improvement by members of their management of greenhouse gas emissions; • develop knowledge and experience about measuring, monitoring, managing reporting and verifying greenhouse gas emissions and sinks; and • strengthen understanding and knowledge between government and industry about practical and cost effective ways of managing greenhouse gas emissions. • The program was designed to demonstrate that voluntary action by the private sector could produce significant results in emissions abatement. In November 1997, the Prime Minister described the program as 'central to the partnership between industry and government to reduce emissions.'
Renewable Energy Equity Fund (REEF)	
Description:	An investment program to encourage the commercialisation of research and development in renewable energy technologies by addressing capital and management constraints.
Value and period:	$21 million from STF, subsequently revised to $19.5 million, for the period 1998/99 to 2008/09
Objectives:	• to encourage the development of companies and other incorporated bodies which are commercialising research and development in renewable energy technologies, by addressing capital and management constraints; and • to develop fund managers with experience in the renewable energy industry. • The program was conceived as a 'technology-push' program that would take the results of research effort and technology development through to market application. It is an investment fund not a grant program.

Renewable Energy Commercialisation Program (RECP)	
Description:	A grant program to support innovative renewable energy equipment, technologies, systems or processes that have strong commercial application and the prospect of significant abatement of greenhouse gas emissions over the longer term.
Value and Period:	$29.6 million from STF, for the period 1998/99 to 2005/06
Objectives:	The objective is to support and/or promote the demonstration and commercialisation of innovative renewable energy equipment, technologies, systems or processes that: (a) have strong potential for widespread commercial application in Australia and/or overseas, including the potential to compete effectively with other energy sources; and (b) offer the prospect of significant abatement of greenhouse gas emissions over the longer term, including through the wider commercial application of the equipment, technologies, systems or processes.
1999 Measures for Better Environment Package	
Greenhouse Gas Abatement Program (GGAP)	
Description:	A grant program to support activities likely to result in substantial emissions reductions or substantial sink enhancement, particularly in the first Kyoto commitment period (2008–2012).
Value and Period:	$400 million from MBE, originally for the period 1999/00 to 2003/04, subsequently extended to 2009/13
Objectives:	To reduce Australia's net greenhouse gas emissions by supporting activities that are likely to result in substantial emissions reductions or substantial sink enhancement, particularly in the first Kyoto commitment period (2008–2012).
Renewable Remote Power Generation Program (RRPGP)	
Description:	A grant program to increase the uptake of renewable energy technologies in remote areas, assist in developing the renewable energy industry, help meet the energy needs of indigenous communities and lead to long-term greenhouse gas reductions.
Value and Period	Up to $264 million from MBE with a subsequent revised estimate of $179.9 million, originally for the period 2000/01 to 2003/04, subsequently extended to 2009/13
Objectives:	(a) increase the uptake of renewable energy technologies in remote areas of Australia that will help in providing an effective electricity supply to remote users; (b) assist the development of the Australian renewable energy industry;

	(c) help meet the energy infrastructure needs of indigenous communities; and (d) lead to long-term greenhouse gas reductions. The funds are available to the participating States and the Northern Territory to fund approved programs or projects. Funding is available for areas that currently rely on 'off-grid' diesel for their power to transfer to renewable energies. The RRPGP may provide support for up to 50 per cent of the capital costs of these renewable energies. The participating States are allocated funding based on the relevant diesel fuel excise available in each jurisdiction. The management of the program is 'contracted out' to the various states and territories.
Photovoltaic Rebate Program (PVRP)	
Description:	A grant program to encourage the long-term use of photovoltaic technology, increase renewable energy in Australia, reduce greenhouse gas emissions, assist in the development of the photovoltaic industry and increase public awareness of renewable energy.
Value and period:	$31 million from MBE with a subsequent revised estimate of $34.6 million, for the period 2000/01 to 2003/04
Objectives:	• encourage the long-term use of photovoltaic (PV) technology to generate electricity from sunlight; • increase the use of renewable energy in Australia, • reduce greenhouse gas emissions, • assist in the development of the Australian PV industry; and • increase public awareness of renewable energy. • The program provides rebates to households installing solar cells that will generate all or part of their energy requirements. The rebate is administrated through the states and territories.
Alternative Fuels Conversion Program (AFCP)	
Description:	A grant program to reduce greenhouse gas emissions and significantly improve urban air quality by facilitating heavier commercial road vehicle and public transport buses to operate on compressed natural gas (CNG) or liquefied petroleum gas (LPG).
Value and period:	$75 million from MBE, with a subsequent revised estimate of $71.4 million, originally for the period 2000/01 to 2003/04, subsequently extended to 2007/08

Objectives:	• to reduce greenhouse gas emissions; and • significantly improve urban air quality, by facilitating heavier commercial road vehicle and public transport buses to operate on either CNG or LPG fuels. • The AFCP is a grant program where vehicle owners can apply to offset costs of fuel conversions and upgrades, and to purchase new vehicles. The program is designed to assist operators and manufacturers of heavy commercial vehicles and buses to convert to compressed natural gas (CNG) or liquefied petroleum gas (LPG).
Extension of RECP	
Description:	Extension of RECP as per 1997 package with additional funding for industry development component.
Value and period:	Extension of $26 million from MBE to the original $29.6 million from STF.
Objectives:	• The objective is to support and/or promote the demonstration and commercialisation of innovative renewable energy equipment, technologies, systems or processes that: • have strong potential for widespread commercial application in Australia and/or overseas, including the potential to compete effectively with other energy sources; and • offer the prospect of significant abatement of greenhouse gas emissions over the longer term, including through the wider commercial application of the equipment, technologies, systems or processes.

Appendix 2: Table outlining program commitments to date

Total Program Commitments till 30 June 2003

	Original Budget estimate for programs	Commitments as at 30 June 2003[A]	*Actual commitments as a per cent of original budget estimate*
GGAP	400.0	272.5	*68.1*
PVRP	31.0[B]	30.6	*98.7*
RRPGP	264.0[C]	202.8	*76.8*
RECP	55.6	49.1	*88.3*
AFCP	75.0[D]	20.2	*26.9*
Challenge	27.1	25.1	*92.9*
REEF	21.0[E]	19.5	*92.8*
Total	**873.7**	**619.8**	***71.1***

[A] This commitments figure reflect all monies allocated to date under each program

[B] This amount has a subsequent revised estimate of $34.6 million

[C] The original budget for RRPGP was determined by the estimate of relevant Diesel Fuel Excise to be paid by public power generators in the years 2000–01 to 2003–04 as at 1999. The Government has subsequently revised the estimate to $179.9m based on estimates in 2000–01.

[D] This amount has a subsequent revised estimate of $71.4 million.

[E] This amount has a subsequent revised estimate of $19.5 million. This full amount is committed by the AGO under the MOU with AusIndustry.

Source: ANAO based on information provided by AGO in November 2003

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