



**Australian Government**  
**Department of the Environment,  
Water, Heritage and the Arts**

# Energy use

in the Australian Government's operations



2007–08

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## Executive summary

- In 2007–08, the Australian Government **improved its overall energy efficiency** over the 2006–07 year. Energy efficiency (or energy intensity) is measured in nine of 14 end use categories for energy consumption. Energy efficiency improvements were achieved in the following eight end use categories:

- **Office—Tenant Light and Power** (five per cent improvement over 2006–07)
- **Office—Central Services** (four per cent improvement over 2006–07)
- **Public Buildings** (five per cent improvement over 2006–07)
- **Computer Centres** (74 per cent improvement over 2006–07)<sup>1</sup>
- **Law Courts** (three per cent improvement over 2006–07)
- **Climate Controlled Stores** (six per cent improvement over 2006–07)
- **Other Buildings** (16 per cent improvement over 2006–07)
- **Passenger Vehicles** (four per cent improvement over 2006–07)

- Further, for all of the above categories except Passenger Vehicles, this improving trend was observable over the longer term, that is since 1999–2000. Note however, that the Computer Centres end use category was only introduced in 2006–07 reporting year.
- The only category which saw an increase in energy intensity was Laboratories. Laboratories energy intensity increased by six per cent in 2007–08 and has also increased intensity over the longer term.
- The *Energy Efficiency in Government Operations* (EEGO) policy has two energy intensity targets to be met by all agencies by June 2011:
  - **7 500 MJ/person/annum for Office—Tenant Light and Power**
  - **400 MJ/m<sup>2</sup>/annum for Office—Central Services.**

In 2007–08, the Australian Government average reached 8 113 MJ/person/annum and 461 MJ/m<sup>2</sup>/annum respectively in each category. In terms of the average for the Australian Government, both targets can be met by June 2011 if the rate of energy intensity improvement observed between 2006–07 and 2007–08 is sustained in coming years.

- Individual agencies vary in the energy efficiency of their operations. However, by 2007–08, 30 per cent of agencies had already achieved the EEGO target of 7 500 MJ/person/annum for Office—Tenant Light and Power, and 40 per cent of agencies had already achieved the 400 MJ/m<sup>2</sup>/annum target for Office—Central Services. Annex B contains energy intensity ranking tables and full details of each agency are contained in the online database.

<sup>1</sup> Computer Centres were introduced as a reporting category in 2006–07: this dramatic improvement in intensity can be attributed to improved reporting accuracy and the reallocation of energy use previously reported in other end use categories into the Computer Centres category.

- Total Australian Government energy use has declined substantially since 1999–2000 due to reductions in Defence Operational Fuel Use in Australia. Energy use in Defence establishments and the rest of the Australian Government's operations has increased over the same time frame. In summary:
  - Defence Operational Fuel Use in Australia reduced by over two per cent between June 2007 and June 2008; and by over 40 per cent between June 2000 and June 2008.
  - Defence Establishments saw a decrease in energy use of almost two per cent between June 2007 and June 2008; but increased slightly between June 2000 and June 2008.
  - The rest of the Australian Government's operations saw an increase in energy use of five per cent between June 2007 and June 2008. However, some of this increase was due to improvements in reporting (rather than actual increases in energy used). Over the longer term, between June 2000 and June 2008, this non-military energy use increased by almost 11 per cent.
- The increase in non-military energy use needs to be considered in the context that the number of Australian Government public servants increased by over 40 per cent between 1999–2000 and 2007–08.
- Buildings account for the majority of greenhouse gas emissions from the Australian Government. This is due to the greater greenhouse impact of electricity than other fuel sources. Consequently, energy savings strategies in buildings offer the greatest potential for reducing the quantity of the Australian Government's greenhouse emissions.
- In 2007–08 the Australian Government achieved a Green Lease Schedule compliance rate of 89 per cent for new leases of 2 000 m<sup>2</sup> or more with a duration of two or more years.
- This 2007–08 report is substantially revised from previous versions, making it more concise and accessible. The printed report now incorporates a combined overview of Australian Government energy use and emissions in Annex A and a series of ranking tables showing agency performance in Annex B. Previous reports have also included more data in an attached CD—this has been replaced with an interactive online database, which provides improved functionality for users. The database can be accessed at:  
<http://www.environment.gov.au/settlements/government/eego/energyuse/>

# Introduction: policy background

## Introduction

In 2006, the *Energy Efficiency in Government Operations* (EEGO) policy was released, replacing its predecessor, *Measures for Improving Energy Efficiency in Commonwealth Operations*. This will be the second report on energy use to be compiled in accordance with the 2006 EEGO policy.

The EEGO policy aims to improve energy efficiency, and consequently reduce the whole of life cost and environmental impact of Government operations, and by so doing, lead the community by example.

The key features of the 2006 EEGO policy are as follows:

- **Reporting requirements and energy intensity targets:**
  - The EEGO policy requires agencies to submit detailed energy use data to their respective Ministers and to the Department of the Environment, Water, Heritage and the Arts (DEWHA) for the purposes of compiling this *Energy Use in the Australian Government's Operations* report.<sup>2</sup>
  - The policy includes performance targets in Office—Tenant Light and Power (TLP) and Office—Central Services (CS) of 7 500 MJ/person/annum and 400 MJ/m<sup>2</sup>/annum respectively.<sup>3</sup> These are to be met by June 2011 and apply to each agency's total property portfolio.
  - The policy also notes the Energy Management Strategy being implemented by the Department of Defence.
- **Minimum energy performance standards (MEPS), including:**
  - energy efficiency measures for new office buildings, major refurbishments and new leases.
  - a lease-based management partnership model known as the Green Lease Schedule.
  - independent energy performance validation requirement for all new office buildings, major refurbishment and new leases over 2 000 m<sup>2</sup> within 15 months of handover. Annual performance validation is required in new leases for office buildings over 2 000 m<sup>2</sup>.
  - focus on energy efficiency with option to integrate greenhouse gas emission reductions, water conservation, waste minimisation and other sustainability issues.
- **Communications and program management, including:**
  - a comprehensive education and awareness program to be developed by DEWHA.
  - mid term and end of term independent policy reviews; the mid term review was conducted in 2009.

<sup>2</sup> Section 516A of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) requires Commonwealth organisations to include in their annual reports a section detailing the environmental performance of the organisation and its contribution to ecologically sustainable development. Energy reporting under the EEGO policy complements this requirement with a detailed submission of energy use data.

<sup>3</sup> MJ = Megajoules.

## Benefits of public reporting

This report, *Energy Use in the Australian Government's Operations*, provides the means to track the Australian Government's progress towards its objective of improving the energy efficiency of its operations.

Regular public reporting of performance provides a number of benefits. These include:

- *Increasing awareness of energy and greenhouse issues*

Regular reporting raises the profile of energy efficiency. The presence of this report has had an effect upon many Australian Government agencies, some of which have developed initiatives that have allowed them to already perform better than the current EEGO targets.

- *Measuring relative performance against benchmarks*

A consistent reporting basis that covers energy or greenhouse intensity (such as megajoules (MJ) per m<sup>2</sup> or MJ per person) allows an organisation to compare its performance with other organisations operating similar facilities. Agencies can also see how they perform relative to benchmarks.

- *Identifying high-intensity areas*

Reporting that tracks changes over time can identify what types of government energy consumption need to be given priority. For example, this report highlights that computer centres and storage (such as those which hold large databases) are generating substantial increases in energy use and are very energy intensive. This suggests that energy efficiency strategies for data centres are needed.

- *Cost savings*

Agencies that measure and monitor their energy use are better able to manage their energy consumption levels, and hence are also better able to control their costs. For example, the ANAO has found that if all agencies that reported their energy use in 2006–07 had already met the energy intensity targets for Office—Tenant Light and Power and Office—Central Services *alone*, then the Australian Government would be saving **\$17 million every year**.<sup>4</sup>

- *Transparency encourages improvement*

The energy and environmental management practices of Australian Government agencies are subject to public scrutiny when detailed in this report. This level of transparency encourages both improved performance and quality reporting of that performance.

<sup>4</sup> Australian National Audit Office (2009), *ANAO Audit Report No 25 2008–09: Green Office Procurement and Sustainable Office Management*, Canberra, recommendation 35.

# About this report

## Objectives

This report provides a detailed account of the energy used by the Australian Government during the 2007–08 financial year, and charts trends in its energy use from 1999–2000 to the present. The data is presented in aggregate, and by portfolio, agency and department (hereafter, all departments and agencies will be referred to simply as ‘agencies’). Energy consumption is also broken down into categories of use, such as the energy used in offices or in passenger transport.

The specific aims of this report are:

- To present a breakdown of energy use in the Australian Government’s operations, according to activity type, portfolio and agency.
- To compare Australian Government agencies’ energy efficiency in relation to the targets set in the EEGO policy. This is achieved by comparing energy intensity of different agencies. Energy intensity is discussed in more detail below.
- To present a best estimate of the greenhouse gas emissions resulting from the activities of the Australian Government.

## Structure

This report consists of a written paper and two annexes which present the bulk of the data used in the report. In addition, the report is complemented by an online interactive database which provides detailed information agency by agency, and by portfolio. To access the database, go to:

<http://www.environment.gov.au/settlements/government/eego/energyuse/>

The written paper is divided into five sections. The first, the introduction, briefly presents the policy context of this report. The second section explains the background and method of the report. The third section presents the main findings on Australian Government energy use and intensities by end use category. The fourth section looks at fuel types and greenhouse gas emissions for the Australian Government as a whole. The final section summarises the main findings of the report.

The annexes have been revised for the 2007–08 report. Annex A provides an overview of Australian Government energy use in all categories and summarises the emissions associated with this. Annex B contains a series of ranking tables which show the relative performance of all 128 agencies within the scope of the EEGO policy in a number of key areas. Previous reports have also included more data in an attached CD—this has been replaced with the interactive online database, providing improved functionality for users.

## Data source

This report is based on energy use data provided by all 128 Australian Government agencies required to report. For the 2007–08 report, an audit was carried out to ensure that all agencies covered by the EEGO policy were included in the dataset. As a result, 15 agencies have been added, raising the total from 113 in 2006–07 to 128 in the current report. The data is entered by end–use category, which allows for a detailed analysis of energy use by revealing what the energy is used for.

## Administrative structures

Energy performance is reported for agencies as they were constituted at 30 June 2008. Where key elements of an agency's undertakings are moved or absorbed by another agency, they carry with them the energy performance for the full financial year.

## Responsibility

Individual agencies gather and submit their data for this report. The information they enter includes energy use data, comments on their energy performance, and their answers to two questionnaires. The first questionnaire collects information about leasing arrangements, and the second obtains information about the performance of vehicles in agency fleets with reference to the Green Vehicle Guide.<sup>5</sup> During the submission process, agencies check and validate their own data. After submission, the data is quality checked by the Department of the Environment, Water, Heritage and the Arts (DEWHA), before it is finalised for use in the report.

While DEWHA makes every effort to identify data anomalies and to have them addressed by the relevant agency, the final responsibility for the accuracy of the information in this report rests with individual reporting agencies.

## Online System for Comprehensive Activity Reporting (OSCAR)

Agencies submit data by 31 October each year (one week later for lead agencies), using the Online System for Comprehensive Activity Reporting (OSCAR). OSCAR is administered by the Department of Climate Change. It was introduced on 31 July 2007 and replaced the previous Energy Data Gathering and Reporting (EDGAR) system.

OSCAR provides a central location for entering energy use data. The total data set within OSCAR is organised to reflect the structure of government portfolios and agencies in 2007–08.

<sup>5</sup> The Green Vehicle Guide (GVG) is hosted by the Department of Infrastructure, Transport, Regional Development and Local Government, and can be viewed at: [www.greenvehicleguide.gov.au](http://www.greenvehicleguide.gov.au). The guide allows users to rate recent vehicle models according to their fuel efficiency and emissions performance.

OSCAR enables users to report their energy consumption into a variety of end use categories outlined within the EEGO policy. These end use categories are described in more detail later this section. OSCAR automatically converts all data into the standard energy units of Megajoules (MJ) and Gigajoules (GJ), and calculates energy intensity and greenhouse gas emissions. Users can produce reports of their energy use, efficiency performance and greenhouse emissions for their records. In addition, during submission, OSCAR automatically highlights any data variation of 10 per cent or more from the previous year.

Once completed, data is submitted by each agency and reviewed by DEWHA. Further correspondence may be required in order to rectify any errors or omissions in data. Agencies are encouraged to provide comprehensive explanation in their comments before confirming the submission as a full and accurate statement of their energy performance, vehicle performance and leasing arrangements for that year.

### Methods: relative performance and energy efficiency

Measuring the energy efficiency of different agencies is not simple due to the Australian Government's diverse operations and functions. Tracking changes in the overall energy consumption of an agency without accounting for its size and functions would give no indication of its actual energy efficiency. For this reason, this report also uses key indicators or 'business measures' to produce 'energy intensity' measurements.

### Energy intensity

**Energy intensity** is the concentration of energy use. For example, MJ/m<sup>2</sup> is the calculation of energy consumed *per m<sup>2</sup>* of a building, agency, portfolio or the Australian Government. This is distinguished from **energy consumption**, which is the total amount of energy used.

Energy intensity (sometimes termed 'normalised energy consumption') is measured in MJ divided by an appropriate 'business measure' such as occupancy, floor area or kilometres travelled. As such, energy intensity has units of MJ/person, MJ/m<sup>2</sup> or MJ/km.<sup>6</sup>

Energy intensity allows agencies of different sizes to be compared in terms of their efficiency. However, energy performance is unique to the type of activity being assessed. For example, it is reasonable to compare office buildings with each other in terms of energy performance, but it would be inappropriate to compare office buildings with laboratories, because they are used for different purposes.

<sup>6</sup> MJ is an abbreviation for megajoule, a unit of energy consumption. 'Person' is an occupant of the space, m<sup>2</sup> represents a square metre of building space and km is the distance travelled by a vehicle in kilometres.

### Example: calculating energy intensity

*A small agency with a staff of 12 people occupies 330 m<sup>2</sup> of office space. During the year, 21 546 kWh of electricity is consumed to light the space and power office equipment.*

Using the conversion rate of 3.6 MJ per kWh, total consumption is 77 566 MJ.

Therefore, the energy intensity of the agency can be expressed as either:

$$77\,566 \text{ MJ}/12 \text{ people} = 6\,464 \text{ MJ/person} \quad \text{or} \quad 77\,566 \text{ MJ}/330 \text{ m}^2 = 235 \text{ MJ/m}^2$$

## End use categories

Each end use category has similar energy performance characteristics and most have a defined intensity as the key indicator of energy efficiency. For some categories however, there is no intensity that adequately represents efficiency. In these cases total energy consumption is used.

The inclusion of end use categories makes it possible to compare the performance of agencies which report in the same end use categories.

Categories like Office—Tenant Light and Power and Passenger Vehicles are reasonably homogeneous and allow ready comparisons between agencies. In other less homogeneous categories, such as Public Buildings or Laboratories, comparisons between agencies should be made only when taking into account all the factors affecting relative performance.

Definitions of the fourteen end use categories used in this report are provided in Table 1.

**Table 1** End use categories and energy intensity targets

<p><b>1. Office—Tenant Light and Power</b></p> <p>Energy used for tenant operations in buildings whose primary function is office space. It includes tenancy lighting, office equipment, boiling water units, supplementary air conditioners etc.</p> <p><b>Key Indicator:</b> MJ/person/annum <span style="float: right;"><b>Target:</b> 7 500 MJ/person/annum</span></p>
<p><b>2. Office—Central Services</b></p> <p>Energy used in the provision of services in office buildings common to all tenants. It includes building air conditioning, lifts, security &amp; lobby lights, domestic hot water etc.</p> <p><b>Key Indicator:</b> MJ/m<sup>2</sup>/annum <span style="float: right;"><b>Target:</b> 400 MJ/m<sup>2</sup>/annum</span></p>
<p><b>3. Public Buildings</b></p> <p>Energy consumed in buildings visited by the public in significant numbers. Typical buildings in the category are public libraries, museums or art galleries.</p> <p><b>Key Indicator:</b> MJ/m<sup>2</sup>/annum</p>

**4. Laboratories**

This category covers all energy use in buildings which are used as laboratories as their primary function.

**Key Indicator:** MJ/m<sup>2</sup>/annum

**5. Law Courts**

This category includes all types of court facilities, whether a relatively small space in a larger building, or housed in a specialised building.

**Key Indicator:** MJ/m<sup>2</sup>/annum

**6. Computer Centres**

Energy consumed in buildings or parts thereof (if separately metered) containing computer or data centres (large capacity servers).

**Key Indicator:** MJ/m<sup>2</sup>/annum

**7. Climate Controlled Stores**

Relates to buildings that are required to maintain 24-hour climate controlled conditions for the protection of the goods they house. This includes archives, safety equipment stores, art stores etc.

**Key Indicator:** MJ/m<sup>2</sup>/annum

**8. Other Buildings**

This category is for facility types that do not fit the other buildings categories, from simple storage sheds to radio transmitter buildings.

**Key Indicator:** MJ/m<sup>2</sup>/annum

**9. Other Uses**

Energy consumption of facilities that do not fit any of the above categories. Examples include street lighting, outdoor recreational facilities etc.

**Key Indicator:** No key indicator as category is too diverse

**10. Passenger Vehicles**

Energy consumption of passenger cars, light commercial vehicles and mini buses and includes the consumption of Senior Executive Service (SES) vehicles.

**Key Indicator:** MJ/km/annum

**11. Other Transport**

Energy consumption of all forms of transport other than passenger vehicles. It includes transport systems engaged exclusively for operational purposes. It does not include energy used for general public transport such as airlines, trains and buses.

**Key Indicator:** No key indicator as category is too diverse

**12. Antarctic Bases**

Covers all buildings and facilities at Antarctic Bases. Does not include transport at Antarctic Bases.

**Key Indicator:** No key indicator as category is too diverse

**13. Defence Establishments**

Covers all buildings and facilities that are within established Defence bases. It does not include office buildings and stores outside bases.

**Key Indicator:** No key indicator as category is too diverse

**14. Defence Operational Fuel Use in Australia**

This category covers the fuel used in Defence Operations for aircraft, tanks, ships, vehicles etc.

**Key Indicator:** No key indicator as category is too diverse and dependent on operational requirements

**Emissions calculations**

In this report emissions data for all years are reported with more accuracy than in previous years. This is because all agency locations currently recorded in OSCAR have been assigned—where possible—to the relevant state or territory. This means that more emissions data have been calculated based on where electricity is used, rather than using national averages as the basis of calculations, which was the case in previous reports. This process of assigning agency locations to the appropriate state or territory will be completed for the 2008–09 report.

To provide an example, if an agency has two buildings, one in Melbourne and one in Hobart, which use similar amounts of electricity, it would be expected that their emissions footprints would be quite different. This is due to the way power is generated in each state: Victoria relies on coal for the bulk of its power generation, while Tasmania is predominantly reliant on hydro-electric generation. This is illustrated in the box below:

**Example:**

*Two office spaces each consume 1 250 000 kWh of electricity a year. One is in Melbourne; the other is in Hobart. The same electricity consumption results in very different emissions footprints:*

**Emissions factors<sup>1</sup>:**

**Victoria: 1.31 kg CO<sub>2</sub>-e /kWh**

Melbourne office calculation:

$$1\,250\,000 * 1.31 = 1\,637\,500 \text{ kg CO}_2\text{-e}$$

$$= \mathbf{1\,637.5 \text{ tonnes CO}_2\text{-e}}$$

**Tasmania: 0.13 kg CO<sub>2</sub>-e /kWh**

Hobart office calculation:

$$1\,250\,000 * 0.13 = 162\,500 \text{ kg CO}_2\text{-e}$$

$$= \mathbf{162.5 \text{ tonnes CO}_2\text{-e}}$$

*Note: CO<sub>2</sub>-e means equivalent to this amount of Carbon Dioxide (CO<sub>2</sub>). [The actual gases emitted are a combination of CO<sub>2</sub> and other greenhouse gases such as methane (CH<sub>4</sub>) and nitrous oxide (NO<sub>2</sub>)]*

<sup>1</sup> Emissions factors were sourced from the Department of Climate Change (2008) *National Greenhouse Accounts (NGA) Factors*, Section 2.3 pp 18–19 <[www.climatechange.gov.au/workbook/index.html](http://www.climatechange.gov.au/workbook/index.html)>

OSCAR is updated with the latest emission factors each year, as described in *the National Greenhouse Accounts (NGA) Factors*, a publication produced each year by the Department of Climate Change. It automatically calculates emissions associated with all activity types. While location is an important factor for accurately estimating emissions caused by electricity use, for other fuels, location is not as relevant. Nonetheless, for many government agencies, electricity represents the bulk of their energy use. All emissions reported for previous years in this report are based on the relevant conversion factors for that particular financial year.

### What is not reported

An important aspect of the Australian Government energy policy is that agencies are expected to be responsible for, and report on, only that energy consumption for which they have direct control. The following energy use is out of the scope of this report:

**All forms of transport which the Australian Government does not directly lease or own:** Travel by air, bus, train, taxi or ferry is not included in this report, unless an agency directly pays for fuel—for example, if it owns and operates a plane or ship.

**Defence Operational Fuels purchased outside Australia:** Only fuel consumed or purchased in Australia is included; where military craft are re-fuelled outside Australia, this is not included.

**Some Office—Central Services electricity consumption:** While tenants are expected to be responsible for the energy consumption of their own light and power, they are not responsible for the energy consumption of the building central services unless they have agreed to this in their lease agreement. In many cases, lease arrangements mean that agencies do not directly pay for central services electricity consumption, and so do not receive consumption data and hence cannot accurately report this. The only office building central services energy consumption that is included in this report is for office buildings that the Australian Government owns, or where the Australian Government, as a tenant, has agreed to assume responsibility for running and maintenance of plant equipment and its energy consumption. Otherwise the remaining office building central services' energy use is unreported.

**Energy used by vehicles on novated leases** is not reported.

**Public servants' own transport to and from work** (and within work hours), is not reported except when it involves the use of fleet or government leased vehicles.

**Energy used by office staff working from home** is not reported.

# Energy Performance

## Aggregate Australian Government energy use

The total reported energy consumption of the Australian Government in 2007–2008 was 20 936 953 GJ.

To put this into perspective, this amounts to approximately five per cent of the total energy consumed by Australian households in a year.<sup>7</sup>

The energy consumed by the Australian Government's operations can be divided into three broad categories. These are:

- **Defence Operational Fuel Use in Australia:** energy used in the operation of aircraft, tanks, ships, submarines, and other Defence vehicles.
- **Defence Establishments:** energy used in all buildings and facilities that are within established Defence bases. It does not include office buildings, warehouses and stores located outside bases.
- **Rest of Government Energy Use (Non-Defence):** energy used by Australian Government agencies and departments in their office spaces, public buildings, museums and libraries, law courts, fleet vehicles and so on. Note that this also includes the Department of Defence's office space and their non-military (white fleet) vehicles.

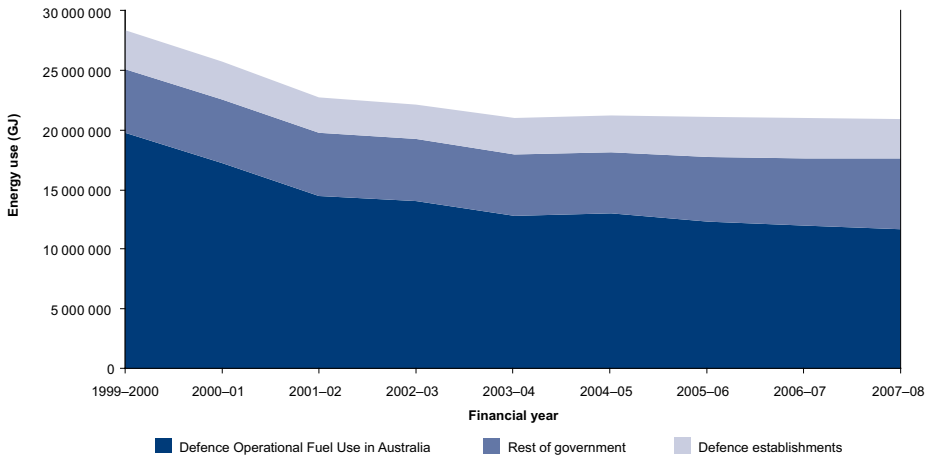
The trends in these three broad categories are shown in Figure 1, which details total Australian Government energy use between 1999–2000 and 2007–08<sup>8</sup>.

**Total Australian Government energy use declined by 26 per cent between 1999–2000 and 2007–08; however, since 2003–04 total energy use has largely stabilised. The major contributor to the decrease was Defence Operational Fuel Use in Australia, which fell by almost 41 per cent during the period shown in Figure 1.**

<sup>7</sup> Total energy consumed by Australian households was estimated by the Australian Bureau of Agricultural and Resource Economics (ABARE) to be 432 Petajoules (PJ) [equivalent to 432 000 000 GJ] in 2004–05. This is the most recent data available on the residential sector. See ABARE (2006) *Australian Energy: National and State Projections to 2029–30*, ABARE Research Report 06.26.

<sup>8</sup> Although data have been collected for *Energy Use in the Australian Government's Operations* since 1997–98, data from the first two years are no longer considered reliable. Consequently, all trends are taken from 1999–2000, unless otherwise stated.

**Figure 1** Total Australian Government energy consumption by major category, 1999–2000 to 2007–08



### Defence Operational Fuel Use in Australia

By far the largest of the three categories is Defence Operational Fuel Use in Australia, which in 2007–08 accounted for 56 per cent of total Australian Government energy use. Since 1999–2000, energy use in this category has declined substantially.

#### Summary statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	11 751 054 GJ	-2.40 %	-40.75 %	<b>Decreasing</b>

Because Defence Operational Fuel Use in Australia is such a varied category, there is no common business measure that can be used for all modes of transport and associated activities, so there is no energy efficiency measure available. Further, despite its significant contribution, Defence operational fuel consumption does not fall within the ambit of EEGO policy, except as a reporting requirement. Levels of consumption can vary widely depending on operational priorities. Because it is outside the scope of the policy, Defence operational fuel consumption is excluded from analysis in this report, unless stated otherwise.

## Defence Establishments

In 2007–08 Defence Establishments accounted for 16 per cent of total Australian Government energy use. This consumption has been largely stable, with a slight increase since 1999–2000:

### Summary statistics

	<i>2007–08</i>	<i>Change from 2006–07 (% change)</i>	<i>Long term change 1999–2000 to 2007–08 (% change)</i>	
<b>Energy use</b>	3 295 706 GJ	–1.88 %	0.83 %	<b>Increasing slightly</b>

Defence Establishments also report on aggregate energy consumption, as Defence bases have traditionally only had a single electricity, gas and water meter. This means that it is currently not possible to measure energy efficiency, because there is no single business measure for all facilities in bases. The Department of Defence is installing new metering systems in large bases as part of its energy management strategy requirement under the EEGO policy.

## All other Australian Government Energy Use (non-Defence)

All Other Government Energy Use (non-Defence) accounted for 28 per cent of the total energy used by the Australian Government in 2007–08. This category increased between 1999–2000 and 2007–08:

### Summary statistics

	<i>2007–08</i>	<i>Change from 2006–07 (% change)</i>	<i>Long term change 1999–2000 to 2007–08 (% change)</i>	
<b>Energy use</b>	5 891 003 GJ	5.07 %	10.96 %	<b>Increasing</b>

## Difference in approach from previous years

Dividing Australian Government energy use into the three large categories outlined above marks a change in approach from previous iterations of this report. Previously, Defence Operational Fuel Use in Australia was excluded from most analysis, while Defence Establishments were added to the Rest of Government energy use to make a combined total. This year, the three categories—Defence Operational Fuel Use in Australia, Defence Establishments, Rest of Government—have been separated in recognition of their different functions, as already shown above. However, to enable comparison with previous reports, the summary statistics box below highlights changes in the combined category of Defence Establishments and Rest of Government energy use since 1999–2000 and since 2006–07.

### Summary statistics: Australian Government Energy total (excluding Defence Operational Fuel Use in Australia)

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	9 185 899 GJ	2.47 %	7.10 %	<b>Increasing</b>

This summary reveals that not only has there been an increase in Australian Government energy use (excluding Defence Operational Fuel Use in Australia) since 2006–07, but that this is a longer term trend, with an overall increase between 1999–2000 and 2007–08.

### Non-Defence Australian Government energy use in more detail

Figure 2 divides the 'Rest of Government Energy Use (Non-Defence)' category into six main categories. Figure 2 shows an overall increase in non-Defence Government energy use. One reason for this growth is the large increase in the number of people working for the Australian Public Service, which increased by 41 per cent between 1999–2000 and 2007–08.<sup>9</sup> In addition, office floor area in the Australian Government has increased by eight per cent over 2006–07, and increased by approximately 33 per cent between 1999–2000 and 2007–08.<sup>10</sup>

While stationary energy was largely stable between 2006–07 and 2007–08, Figure 2 shows an increase in transport energy consumption. This is due to the Australian Customs Service reporting the aviation fuel used in its air operations for the first time in 2007–08; data had previously not been available. This has resulted in a substantial increase in *reported* transport energy, but it does not necessarily suggest any increase in *actual* transport energy used.

<sup>9</sup> Australian Public Service Commission 2008, *State of the Service Report 2008*.

<sup>10</sup> Total reported areas for office spaces (Office—Tenant Light and Power) were: 2 509 354m<sup>2</sup> in 1999–2000; 3 087 164 m<sup>2</sup> in 2006–07; and 3 330 888 m<sup>2</sup> in 2007–08.

**Figure 2** Non-Defence related Government energy consumption by major category, 1999-2000 to 2007-08

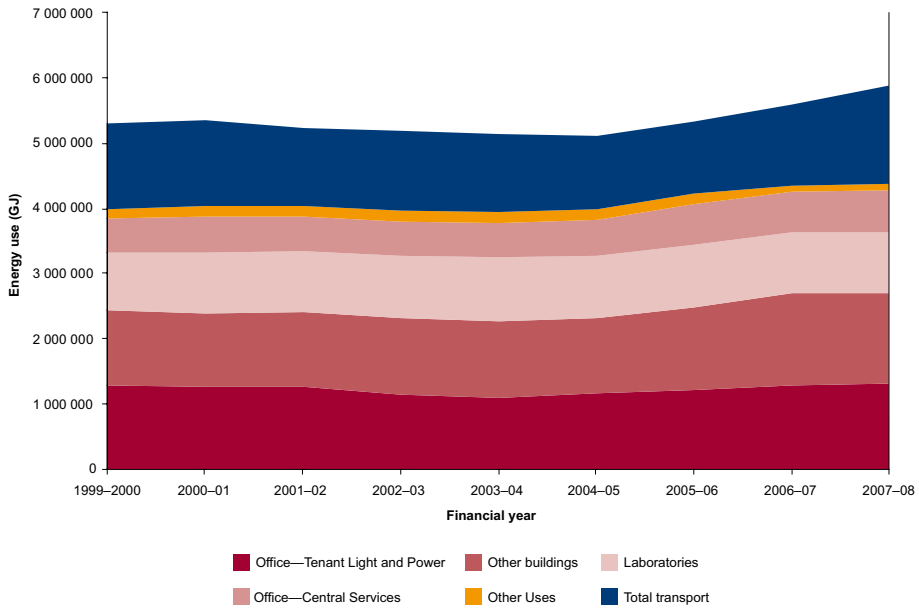


Figure 2 notes:

**Other buildings** includes: Climate Controlled Stores, Computer Centres, Law Courts, and Other Buildings (not further defined);

**Other uses** includes: Antarctic Bases and Other Uses (not further defined);

**Total transport** includes: Passenger Vehicles and Other Transport (not further defined).

Table 2 provides more detail about the categories presented in Figure 2. It provides a breakdown of energy consumption by end use category for the year 2007–08.

**Table 2** Non-Defence Australian Government energy consumption by all categories 2007–08

	<b>Total GJ</b>	<b>Percentage of total non-Defence government energy use</b>
<b>Transport Energy</b>		
<b>Total Transport:</b>	<b>1 507 525</b>	<b>25.59 %</b>
Passenger Vehicles <sup>11</sup>	619 742	10.52 %
Other Transport <sup>12</sup>	887 783	15.07 %
<b>Stationary Energy</b>		
<b>Office—Tenant Light and Power</b>	<b>1 333 661</b>	<b>22.64 %</b>
<b>Office—Central Services</b>	<b>643 997</b>	<b>10.93 %</b>
<b>Laboratories</b>	<b>921 382</b>	<b>15.64 %</b>
<b>All Other Buildings:</b>	<b>1 388 398</b>	<b>23.57 %</b>
Computer Centres	199 957	3.39 %
Climate Controlled Stores	47 516	0.81 %
Public Buildings	344 075	5.84 %
Law Courts	108 034	1.83 %
Other Buildings	688 817	11.69 %
<b>Other Uses:</b>	<b>95 230</b>	<b>1.62 %</b>
Antarctic Bases	66 809	1.13 %
Other Uses (not further defined) <sup>13</sup>	28 421	0.48 %
<b>Total</b>	<b>5 890 193</b>	<b>100 %</b>

Note: Percentages in grey are of total Non-Defence Australian Government energy use, not percentages of specific categories.

<sup>11</sup> Note: this only includes transport where the vehicles are either leased or owned by the Australian Government, for example, fleet cars (including Defence white vehicles). It does not extend to modes of transport (such as air, rail, bus or taxi) where the Australian Government does not directly pay for fuel used.

<sup>12</sup> This includes specific purpose and commercial vehicles such as those used by the Australian Customs Service and the Australian Federal Police.

<sup>13</sup> Other Uses refers to stationary energy only.

Table 3 presents more information about the end use categories listed in Table 2. Table 3 summarises the key information about each category over time:

**Table 3** End use category energy use and intensity 2007–08, and changes over time

		2007–08	Change from 2006–07	Change from 1999–2000
<b>Transport Energy</b>				
<b>Passenger Vehicles</b>	<i>Energy use</i>	619 742 GJ	–8.36 %	–8.97 %
	<b>Energy intensity</b>	<b>3.68 MJ/km/annum</b>	<b>–4.06 %</b>	<b>9.98 %</b>
<b>Other Transport</b>	<i>Energy use</i>	887 783	56.89 %	44.19 %
<b>Stationary Energy</b>				
<b>Office—Tenant Light and Power</b>	<i>Energy use</i>	1 333 661 GJ	2.49 %	2.50 %
	<b>Energy intensity</b>	<b>8 113 MJ/person/annum</b>	<b>–5.60 %</b>	<b>–30.95 %</b>
<b>Office— Central Services</b>	<i>Energy use</i>	643 997 GJ	2.42 %	24.62 %
	<b>Energy intensity</b>	<b>461 MJ/m<sup>2</sup>/annum</b>	<b>–3.95 %</b>	<b>1.49 %</b>
<b>Laboratories</b>	<i>Energy use</i>	921 382 GJ	–0.80 %	3.76 %
	<b>Energy intensity</b>	<b>1 164 MJ/m<sup>2</sup>/annum</b>	<b>6.23 %</b>	<b>10.24 %</b>
<b>Computer Centres</b>	<i>Energy use</i>	199 957 GJ	73.60 %	n/a
	<b>Energy intensity</b>	<b>10 565 MJ/m<sup>2</sup>/annum</b>	<b>–73.05 %</b>	<b>n/a</b>
<b>Climate Controlled Stores</b>	<i>Energy use</i>	47 516 GJ	–6.29 %	–30.34 %
	<b>Energy intensity</b>	<b>694 MJ/m<sup>2</sup>/annum</b>	<b>–6.10 %</b>	<b>–0.64 %</b>
<b>Public Buildings</b>	<i>Energy use</i>	344 075 GJ	–4.24 %	7.80 %
	<b>Energy intensity</b>	<b>1 094 MJ/m<sup>2</sup>/annum</b>	<b>–4.57 %</b>	<b>–5.74 %</b>
<b>Law Courts</b>	<i>Energy use</i>	108 034 GJ	–2.61 %	3.06 %
	<b>Energy intensity</b>	<b>607 MJ/m<sup>2</sup>/annum</b>	<b>–2.75 %</b>	<b>–0.09 %</b>
<b>Other Buildings</b>	<i>Energy use</i>	688 817 GJ	–10.61 %	4.53 %
	<b>Energy intensity</b>	<b>625 MJ/m<sup>2</sup>/annum</b>	<b>–16.86 %</b>	<b>–29.17 %</b>
<b>Antarctic Bases</b>	<i>Energy use</i>	66 809 GJ	1.32 %	–14.13 %
<b>Other Uses (not further defined)</b>	<i>Energy use</i>	28 421 GJ	–11.86 %	–63.12 %

Notes: n/a = not applicable; data not available for that time period. All intensity figures are calculated by dividing the total energy use for that category by the total of the business measure; hence they take into account the weighting of different agencies.

## Stationary Energy

### Office spaces—summary

The EEGO policy has two targets for office buildings, to be achieved by June 2011:

- **7 500 MJ/person/annum for Office—Tenant Light and Power (TLP)**
- **400 MJ/m<sup>2</sup>/annum for Office—Central Services (CS)**

**Energy efficiency in these categories has increased by six per cent and four per cent respectively since 2006–07. The EEGO policy targets for June 2011 may be met by the Australian Government as a whole if energy efficiency continues to improve at this rate.**

### Office—Tenant Light and Power (TLP)

The TLP category is the only one for which there are two key indicators: MJ/person/annum and MJ/m<sup>2</sup>/annum. The indicator used for the EEGO policy target is MJ/person/annum, recognising that overall energy efficiency is a combination of the economical use of the office space *and* the efficient use of energy within the space. The target of 7 500 MJ/person/annum applies to *every* agency, across their entire property portfolio.

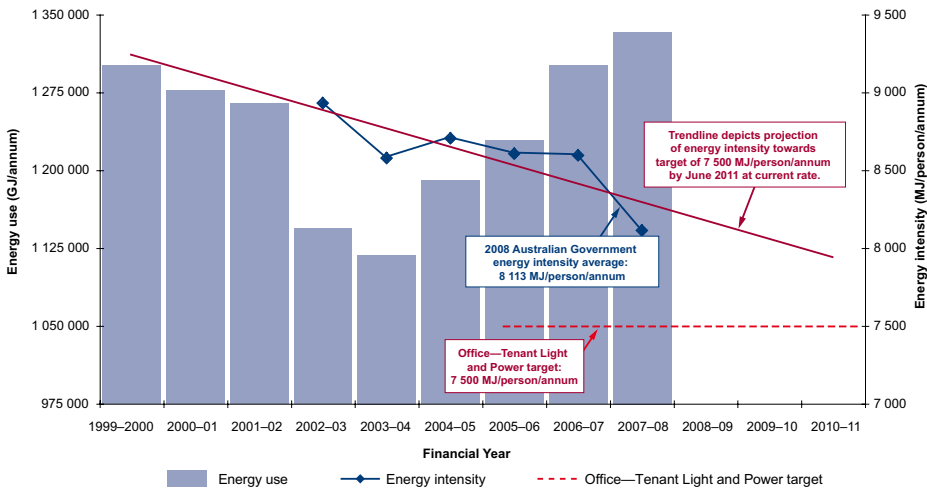
The TLP category accounted for 23 per cent of the Australian Government's total (non-Defence) energy consumption in the 2007–2008 reporting year. As such, this category is a substantial user of energy.

Figure 3 displays the energy used within the TLP category together with the energy intensity figures. The intensity figures are produced from 2002–03 onwards as the data prior to this was too volatile to be used as the basis of a trend line. Figure 3 shows that energy intensity is declining—in 2002–03 it was 8 931 MJ/person/annum, and by 2007–08 it was 8 113 MJ/person/annum<sup>14</sup>; an improvement of nine per cent. Further, TLP energy use per m<sup>2</sup> decreased by almost 23 per cent between 1999–2000 and 2007–08: from 519 MJ/m<sup>2</sup>/annum to 400 MJ/m<sup>2</sup>/annum. Since 2006–07 energy efficiency in the TLP category has improved by almost six per cent. In other words, government agencies are using their office energy more efficiently.

On the other hand, Figure 3 also reveals that the total amount of energy used in the TLP category is volatile year on year, and increased slightly (by 2.5 per cent) between 1999–2000 and 2007–08. As described later in this report, TLP has one of the highest emissions intensities of any end use category—that is to say, each quantity of energy used for TLP results in more emissions than most other Australian Government end use categories.

<sup>14</sup> All intensity values are calculated as averages for the Australian Government as a whole by dividing energy use by the total of the business measure; hence they take into account the relative weighting of each agency.

**Figure 3** Australian Government Office—Tenant Light and Power energy use 1999–2000 to 2007–08 and intensity 2002–03 to 2007–08



### Leading by example

Taken together, the Australian Government energy intensity figures for TLP (8 113 MJ/person/annum and 400 MJ/m<sup>2</sup>/annum) suggest that, on average, the Australian Government is already achieving strong efficiency performance in its tenancies, as these figures represent better than average energy performance in this category. When negotiating a substantial new lease or major refurbishment, all Australian Government agencies are required to meet an efficiency rating of 4.5 stars. As more leases are negotiated or renewed, DEWHA expects the Australian Government's TLP energy efficiency to continue to improve. More details about lease requirements are presented in the section on leasing.

### Agency and portfolio performance

Table 4 shows the relative performance of each of the Australian Government's portfolios that reported TLP in the 2007–08 financial year. These figures represent averages for whole portfolios; individual agency performance within portfolios can vary considerably. The green band indicates portfolios which are already performing at or below the EEGO policy target of 7 500 MJ/person/annum. The yellow band reflects those portfolios which have attained the previous Australian Government energy efficiency target<sup>15</sup> (to operate at or below 10 000 MJ/person/annum) and are tracking positively towards the EEGO target. The red band indicates portfolios yet to reach the previous target.

<sup>15</sup> This target was contained within the policy *Measures for Improving Energy Efficiency in Commonwealth Operations* (MIEECO) and was to be achieved by 2003. The EEGO policy TLP target represents a 25 per cent improvement on the MIEECO policy TLP target.

**Table 4** Office—Tenant Light and Power energy use and intensity by portfolio

	2007–08		MJ/m <sup>2</sup> *	People	MJ/person*	2006–07 to	1999–2000
	Energy (GJ)	Area (m <sup>2</sup> )				2007–08	to 2007–08
Human Services Portfolio	259 308	728 943	356	39 425	6 577	-10.25	-41.18
Health and Ageing Portfolio	38 145	107 033	356	5 727	6 661	-3.71	-42.45
Innovation, Industry, Science and Research Portfolio	23 587	65 352	361	3 422	6 892	-46.67	-20.00
Treasury Portfolio	238 214	608 551	391	33 346	7 144	-3.78	-29.28
Environment, Water, Heritage and the Arts Portfolio	27 569	82 446	344	3 777	7 299	10.87	-23.03
Immigration Portfolio	61 638	139 736	441	8 237	7 483	-0.66	-36.82
Agriculture Fisheries and Forestry Portfolio	35 108	86 610	405	4 515	7 776	20.12	-27.24
Resources, Energy and Tourism Portfolio	9 876	36 738	269	1 226	8 057	1.68	-53.35
Defence Portfolio	170 697	430 938	396	20 365	8 382	-7.50	-41.99
Infrastructure, Transport, Regional Development and Local Government Portfolio	20 744	57 956	358	2 446	8 481	-5.23	-35.35
Prime Minister and Cabinet Portfolio	22 084	59 063	374	2 411	9 158	-11.26	-28.97
Foreign Affairs and Trade Portfolio	35 534	75 858	468	3 590	9 898	4.08	-39.47
Broadband, Communications and the Digital Economy Portfolio	13 576	31 019	438	1 337	10 154	12.98	-12.61
Education, Employment and Workplace Relations Portfolio	82 044	182 672	449	8 011	10 241	-14.93	-11.96
Attorney-General's Portfolio	198 080	457 770	433	19 087	10 378	-6.42	-25.42
Families, Housing, Community Services and Indigenous Affairs Portfolio	44 794	83 317	538	3 538	12 661	-16.96	58.52
Finance and Deregulation Portfolio	52 663	96 887	544	3 924	13 421	47.40	-30.95
<b>Australian Government Total</b>	<b>1 333 661</b>	<b>3 330 888</b>	<b>400</b>	<b>164 384</b>	<b>8 113</b>	<b>-5.60</b>	<b>-30.95</b>

\* All intensity values are calculated as averages for the portfolio or the Australian Government overall by dividing total TLP energy use by the total of the business measure; hence they take into account the relative weighting of each agency.

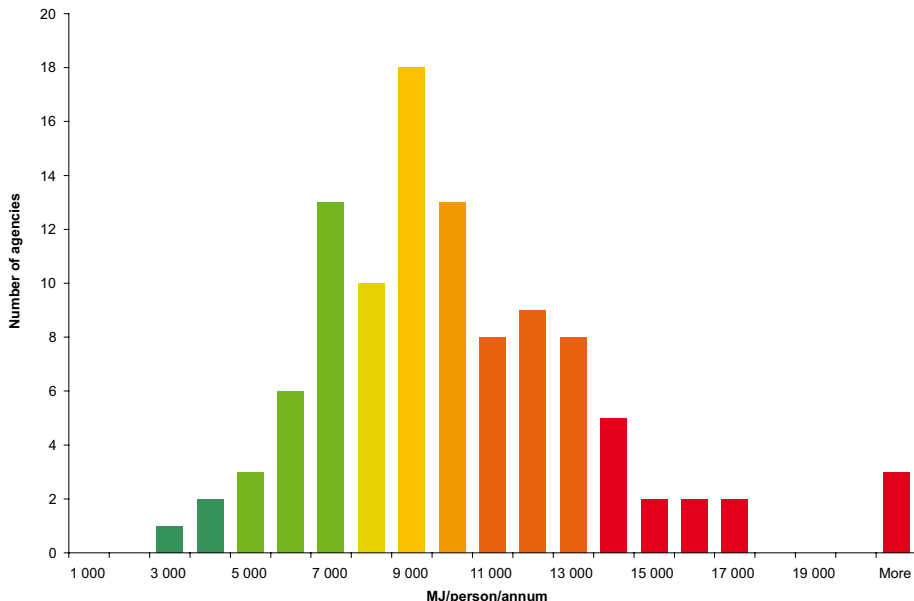
The summary below highlights some of the strategies of agencies that have contributed to the good performance of the Human Services and Health and Ageing Portfolios.

**Contributing to the Human Services and Health and Ageing portfolios' performances are initiatives by individual agencies which include:**

- **Occupancy of energy efficient buildings**—Centrelink and Medicare
- **Energy auditing and planning regimes to implement suggested changes**—CRS Australia and Food Standards Australia New Zealand
- **Efficient lighting systems and sensors**—National Blood Authority and ARPANSA
- **Staff awareness**—Private Health Insurance Ombudsman
- **Contractual agreements**—the Australian Institute of Health and Welfare has introduced contractual agreements with cleaners to switch off non essential lighting.

Annex B.1 ranks all agencies by their TLP energy intensity in MJ/person/annum. It shows that agencies vary greatly in terms of their office energy efficiency. Figure 4 below shows the information from Annex B.1 in a different way—highlighting the performance of agencies as a distribution curve. It shows a peak of agencies between 9 000 and 10 000 MJ/person/annum, although 31 agencies out of 105, or 30 per cent, are already performing at less than 7 500 MJ/person/annum. On the other hand, a small but significant number of agencies are performing inefficiently in comparison to the rest. However, some agencies were not able to separate their computer centre energy usage from their TLP, resulting in high energy intensity figures for a small number of agencies. For details on specific agencies' energy use, refer to the agency data contained in the online database.

**Figure 4** 2007–08 Office—Tenant Light and Power energy intensity: distribution of all agencies which reported this category



The best performing agencies include the Department of Climate Change; Director of National Parks; National Capital Authority; Land & Water Australia; Department of Resources, Energy and Tourism; Australian Agency for International Development (AusAID); National Health and Medical Research Council; Workplace Authority; Great Barrier Marine Park Authority and the Australian Research Council.

### Office—Central Services (CS)

The Office—Central Services (CS) category accounted for 11 per cent of the Australian Government's total (non-Defence) energy consumption in the 2007–08 reporting year. This category covers energy used for services in office buildings like air conditioning, lifts, security and lobby lighting and hot water, and is often referred to as base building energy use. Agencies which report energy in this category also report energy under TLP for their office lighting and power use.<sup>16</sup> The key indicator in this category is MJ/m<sup>2</sup>/annum, as central services will typically service an entire building regardless of how many people occupy the building.

### Leading by example

The Australian Government overall is performing strongly in the CS category. Between 2006–07 and 2007–08, the Australian Government's average energy intensity in this category decreased by over four per cent to 461 MJ/m<sup>2</sup>/annum. This figure represents good energy management of plant equipment. The rate of decline between 2005–06 and 2007–08 has been rapid, reflecting improvements in reporting accuracy. If energy intensity in CS continues to decrease at this rate, then the Australian Government average will surpass the EEGO policy target of 400 MJ/m<sup>2</sup>/annum by 2010–11.

On the other hand, Figure 5 shows that intensity figures for this category have been volatile year on year. It is only since 2002–03 that figures have become consistent enough to put forward a trend estimate (indicated by the dark red line in Figure 5). If this trend line is indicative, then the Australian Government as a whole may not achieve the 400 MJ/m<sup>2</sup>/annum target by 2010–11.

The bars in the chart background show total energy consumption in GJ. This has increased over time. One factor contributing to this is improved reporting of CS energy use. Nonetheless, the trend has been consistent over eight years, indicating real increases in this category.

<sup>16</sup> The Property Group (part of the Department of Finance and Deregulation) is an exception. It owns several large buildings which are leased by other Australian Government agencies. As the building owner, the Property Group reports the CS energy consumption of these buildings, whilst the tenant agencies report TLP.

**Figure 5** Australian Government Office—Central Services energy use 1999–2000 to 2007–08 and intensity 2001–02 to 2007–08

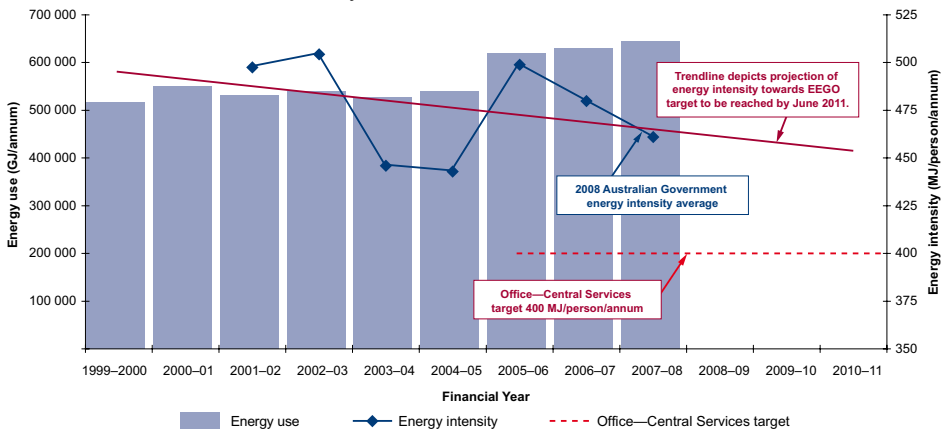


Table 5 shows CS energy use and intensity trends by portfolio. As with TLP, there is substantial variation in portfolio performance for this category. The green section of the table refers to portfolios which are already performing at or below the EEGO policy target of 400 MJ/m<sup>2</sup>/annum. The yellow band reflects those portfolios which have attained the previous energy efficiency target for CS<sup>17</sup> (to operate at or below 500 MJ/m<sup>2</sup>/annum) and are tracking towards the EEGO target. The red band indicates portfolios yet to reach the previous target.

<sup>17</sup> This target was contained within the policy Measures for Improving Energy Efficiency in Commonwealth Operations (MIEECO) and was to be achieved by 2003. The EEGO policy CS target represents a 20 per cent improvement on the MIEECO policy CS target.

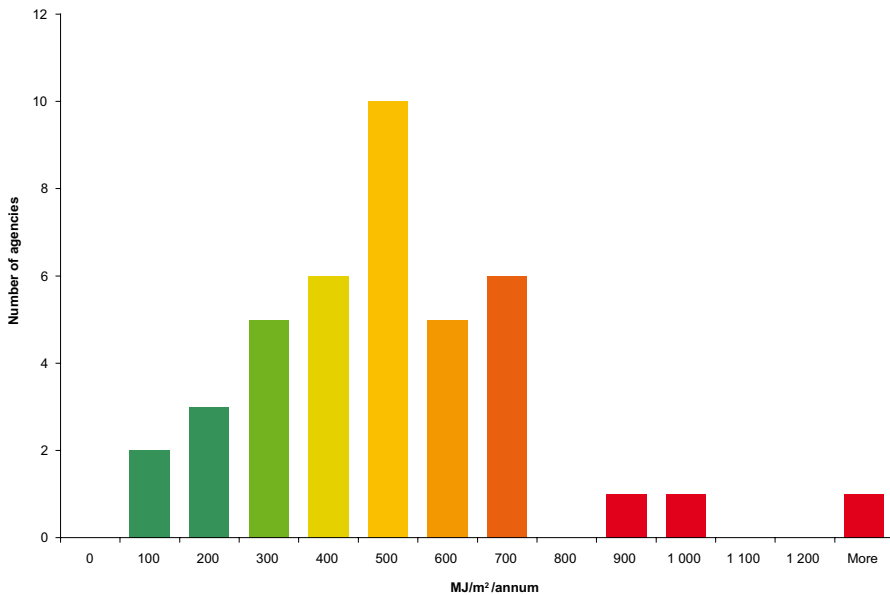
**Table 5** Office—Central Services energy use and intensity by portfolio

	2007–08			2006–07 to 2007–08	1999–2000 to 2007–08
	Energy GJ	Area m <sup>2</sup>	MJ/m <sup>2</sup> *	% change	% change
Broadband, Communications and the Digital Economy Portfolio	91	1 060	86	7.31	N/A
Environment, Water, Heritage and the Arts Portfolio	14 217	57 302	248	0.89	0.03
Human Services Portfolio	167 345	435 438	384	6.72	–24.33
Innovation, Industry, Science and Research Portfolio	5 497	13 945	394	–11.24	–9.24
Attorney-General's Portfolio	91 100	217 317	419	–15.03	–14.97
Prime Minister and Cabinet Portfolio	16 753	38 289	438	–14.50	–19.63
Foreign Affairs and Trade Portfolio	22 906	49 452	463	–13.39	3.75
Families, Housing, Community Services and Indigenous Affairs Portfolio	6 253	12 949	483	0.76	N/A
Treasury Portfolio	77 052	144 504	533	–13.62	38.76
Defence Portfolio	142 710	264 429	540	–0.90	–6.71
Immigration Portfolio	2 490	4 506	553	175.82	N/A
Finance and Deregulation Portfolio	62 941	107 543	585	–5.73	99.19
Resources, Energy and Tourism Portfolio	18 015	30 728	586	–6.98	–42.50
Infrastructure, Transport, Regional Development and Local Government Portfolio	440	650	677	2.72	–4.06
Agriculture Fisheries and Forestry Portfolio	3 994	5 514	724	–24.31	N/A
Health and Ageing Portfolio	12 193	13 620	895	–10.18	611.01
<b>Australian Government Total</b>	<b>643 997</b>	<b>1 403 907</b>	<b>459</b>	<b>–4.41</b>	<b>1.01</b>

\* All intensity values are calculated as averages for the portfolio or the Australian Government overall by dividing total CS energy use by the total of the business measure; hence they take into account the relative weighting of each agency.

Annex B.2 contains a ranked list of all agencies by their CS energy use per square metre. Figure 6 presents this information as a distribution curve. Fewer agencies report CS, due to their leasing arrangements (for more details please refer to leasing section). The peak of the distribution is between 500 and 600 MJ/m<sup>2</sup>/annum, and 16 agencies out of 40, or 40 per cent, have already achieved the EEGO policy target of 400 MJ/m<sup>2</sup>/annum.

**Figure 6** 2007–08 Office—Central Services energy intensity: distribution of all agencies which reported this category



The best performing agencies in terms of CS efficiency were: the Australian Centre for International Agricultural Research; Australian Communications and Media Authority; Medicare Australia; Land & Water Australia; National Library of Australia; Christmas Island Administration; National Capital Authority; Australian Institute of Family Studies; Australian Institute of Criminology; and ARPANSA. All of these agencies operated at less than 300 MJ/m<sup>2</sup>/annum.

The summary box below highlights some of the strategies used by the best performing agencies to reduce their CS energy use.

- **Installation of solar panels:** the Australian Centre for International Agricultural Research worked with their building owner to install solar panels.
- **Improved practices for operating Building Management Systems** have been adopted by Land & Water Australia, the National Library of Australia and ARPANSA

## Laboratories

### Summary statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	921 382 GJ	–0.80 %	3.76 %	<b>Increasing</b>
<b>Energy intensity</b>	1 164 MJ/m <sup>2</sup> /annum	6.23 %	10.24%	<b>Increasing</b>

At 16 per cent, the Laboratories category constitutes a substantial proportion of the Australian Government's non-Defence related energy use. It is the second largest category of stationary energy use after TLP.

The fact that there has been both an increase in overall energy use *and* an increase in the amount of energy used per m<sup>2</sup> identifies Laboratories as an area to focus on in terms of improving energy efficiency. Annex B.3 contains a ranking table of all agencies which reported energy use under the Laboratories category—energy intensity ranged from 318 MJ/m<sup>2</sup>/annum for the best performing agency to 2 943 MJ/m<sup>2</sup>/annum for the most energy intensive agency in this category.

In terms of actual energy used, two agencies dominate the Laboratories category: the Commonwealth Scientific and Industrial Research Organisation (CSIRO), which accounted for 641 916 GJ of Laboratories energy use; and the Department of Defence, which accounted for 180 991 GJ in 2007–08. Both agencies reported that they are working on ways to monitor and reduce their overall energy use, through a range of strategies including better sub-metering, audits, better collation and analysis of energy data, and energy management plans. CSIRO also advises that it is implementing an environmental sustainability strategy, with the high level targets of halving mains water consumption and waste generation, and becoming carbon neutral, by 2015. In terms of actual performance, CSIRO has reduced its Laboratories energy use and intensities since 2004–05, while Defence has seen a slight increase in energy use over the same period. Coupled with a decrease in area, this has resulted in the Department of Defence's energy intensity increasing substantially between 2006–07 and 2007–08. For more details, refer to individual agency data in the online database.

One agency which has seen considerable improvement in its Laboratories energy figures is Geoscience Australia. Although energy consumption varies year to year depending on the type of experiments conducted and their frequency, Geoscience Australia has an ongoing program of monitoring energy consumption and implementing energy saving initiatives. Geoscience Australia has a facilities management contract that includes the following services:

- A program to continuously improve the energy efficiency of the facilities by cost effective methods.
- Routine surveys of plant equipment to assess their function and identify any wasteful operation or practices.
- Routine monitoring of services through the building control management system and using data loggers, including optimising time schedules to maintain peak operational efficiency.
- 24/7 monitoring of the building by its service provider.

## All Other Buildings

In addition to office space and laboratories, the Australian Government occupies several other types of premises. These are public buildings, computer centres, law courts, climate controlled stores, and other buildings (not further defined—but this includes locations as diverse as dog detection units and warehouses). Together, these building types accounted for almost 24 per cent of total (non-Defence) Australian Government energy use in 2007–08. The key facts about each category are discussed below.

### Public Buildings

#### Summary statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	344 075 GJ	–4.24 %	7.80 %	<b>Increasing<sup>18</sup></b>
<b>Energy intensity</b>	1 094 MJ/m <sup>2</sup> /annum	–4.57 %	–5.74 %	<b>Decreasing</b>

The Public Buildings category accounted for almost six per cent of total (non-Defence) government energy use in 2007–08. Typical buildings in this category are public libraries, museums and art galleries. There is often a requirement to maintain close control of internal environmental conditions on a 24 hour basis in these buildings. For example, the National Gallery of Australia is required to maintain strict heating, cooling and humidity controls to protect visiting exhibitions. Annex B.4 contains a ranking table which compares agency performance in the Public Buildings category. In 2007–08, the lowest energy consumer in this category was Christmas Island Administration, with 90 MJ/m<sup>2</sup>/annum.

<sup>18</sup> Note: Public Buildings energy consumption figures have been volatile over this period, and the largest increase occurred between 1999–2000 and 2000–01. From 2000–01 to 2007–08, energy use has declined slightly, so it is inadvisable to read too much into this apparent increase.

Two agencies which reported decreased energy use in this category compared with 2006–07 were Questacon and the Department of Parliamentary Services. Questacon identified that proactively responding to seasonal changes by manually turning off the chillers during winter and fine tuning the building management system helped it to reduce its public buildings energy consumption. The Department of Parliamentary Services attributed their energy reductions to initiatives to conserve energy in addition to the effect of the 'caretaker period' when the election was called, because this reduced the number of sitting days in Parliament.

## Computer Centres

### Summary Statistics

	2007–08	Change from 2006–07 (% change)	Longer term change 2005–06 to 2007–08 (% change)
<b>Energy use</b>	199 957 GJ	73.60 %	198.41 % <b>Increasing</b>
<b>Energy intensity</b>	10 565 MJ/m <sup>2</sup> /annum	-73.05 % <sup>19</sup>	No intensity data available prior to 2006–07

In this report, the category of Computer Centres is broad ranging and does not only refer to purpose built facilities—it encompasses everything from a section of office space dedicated to computer servers, to server rooms, to specifically designed facilities for large data centres. All energy used for these facilities, whether power for computer equipment, lighting or cooling, can be reported in this category.

Computer Centres constitute only three and a half per cent of total (non-Defence) Australian Government energy use, but energy reported in this category has increased dramatically since its introduction in 2006–07. It is not likely that all of this increase can be attributed to increases in the *actual* amount energy used. Instead, a substantial amount of the increase is due to more energy being *reported* in this category. Each year, more agencies are separately metering the electricity they use for their computer rooms and data centres. This energy use was previously reported under TLP or the Other Buildings categories. Consequently, it is difficult to confidently determine any trends in computer centres energy use within the Australian Government.

Nonetheless, data storage is growing rapidly in the market as a whole, resulting in real and significant increases in energy use. Consequently, DEWHA is undertaking further studies into energy use in computer rooms and data centres. With consumption in excess of 10 000 MJ/m<sup>2</sup>/annum, these facilities are very energy intensive. The amount of energy per square metre is much higher than for any other end use category. Individual agency performance in the Computer Centres category is reported in Annex B.5.

<sup>19</sup> Note: This decline is likely due to more accurate reporting of area, rather than a sign of efficiency.

## Law Courts

### Summary Statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	108 034 GJ	–2.61 %	3.06 %	<b>Increasing</b>
<b>Energy intensity</b>	607 MJ/m <sup>2</sup> /annum	–2.75 %	–0.09	<b>Decreasing</b>

The Law Courts category includes all types of court facilities. In 2007–08, Law Courts accounted for just under two per cent of the Australian Government's total (non-Defence) energy use.

Annex B.6 contains a ranking table of all agencies which reported in the Law Courts category in 2007–08. Five agencies reported in this category.

## Climate Controlled Stores

### Summary Statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	47 516 GJ	–6.29 %	–30.34 %	<b>Decreasing</b>
<b>Energy intensity</b>	694 MJ/m <sup>2</sup> /annum	–6.10 %	–0.64 %	<b>Decreasing</b>

The Climate Controlled Stores category covers facilities that require 24 hour temperature and humidity control in order to preserve items in storage. Typical purposes include archives, and storage for museums and art galleries. In 2007–08, Climate Controlled Stores accounted for less than one per cent of the Australian Government's total (non-Defence) energy use. Since 1999–2000, overall energy used in this category has declined by almost a third.

Several agencies reported how they had improved their energy consumption and efficiency in the Climate Controlled Stores category in 2007–08. Some of the strategies included:

- *Staging of boiler operations through changing related procedural algorithms—National Archives of Australia.*
- *Widening parameters for climate controlled areas and increased maintenance in the calibration of sensors in controlled store areas—National Library of Australia.*
- *Sealing of building elements within the climate control stores and changes to humidification equipment—National Maritime Museum.*
- *Continuous monitoring and adjusting control strategies—National Museum of Australia.*
- *Installation of more efficient chillers—Australian War Memorial.*

Annex B.7 contains a ranking table of all agencies which reported in the climate controlled stores category in 2007–08.

## Other Buildings

### Summary Statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	688 817 GJ	–10.61 %	4.53 %	<b>Increasing</b>
<b>Energy intensity</b>	625 MJ/m <sup>2</sup> /annum	–16.86 %	–29.17 %	<b>Decreasing</b>

The category of Other Buildings ranges from simple storage sheds through to radio transmitters, which have very different energy needs. As a result, energy intensity figures should be interpreted with caution. In 2007–08, the Other Buildings category accounted for approximately 12 per cent of the Australian Government's total (non-Defence) energy use.

While overall energy use has increased since 1999–2000, energy use per square metre has declined by almost a third over the same period. While this may represent an actual improvement in energy efficiency, it may also be due to changes in the type of buildings reported in this category. The Australian Taxation Office notes that 2007–08 is the first year it has reported only storage facilities in this category; previously it had also reported its computer server centres in this category.

Annex B.8 ranks all agencies which reported in the Other Buildings category in 2007–08.

### Energy use in buildings—summary

Energy use in Australian Government occupied buildings, excluding Defence Establishments, has increased by more than 11 per cent since 1999–2000. This is partly attributable to better reporting—every year, the data received from agencies is more detailed and accurate.

An important point to emphasise is that, in many cases, central services or base building energy use has not been reported here, and consequently the aggregate total for government occupied buildings underestimates the total energy used. Nonetheless, without good information on central services energy consumption from building owners, it is not possible to provide more comprehensive data.

## Leasing

Most Australian Government agencies do not own their own buildings, but instead rent premises appropriate to their business needs. Agencies utilise a wide range of lease types, from pure gross lease arrangements where the tenant only pays rent and the building owner is entirely responsible for managing central services energy consumption, through to net lease arrangements where the tenant is separately billed for all energy use, including central services.

DEWHA discussions with several agencies during the 2007–08 reporting year revealed that some leases contain a mixture of both gross and net lease arrangements. These 'mixed' lease types typically include ongoing rental plus some form of indirect billing for central services energy consumption. In many of these cases, agencies are required to pay costs estimated on the amount of floor space they rent, regardless of how much energy they actually use. Further, normally only dollar amounts are sent to tenants, not the energy use, which makes it difficult to report actual energy used.<sup>20</sup> With these leases, there is no financial incentive for tenants to be more energy efficient, because they will still need to pay on an area basis, and may end up compensating less efficient tenants in the same premises. Similarly, because building owners are recovering their central services energy costs, there is no incentive for them to reduce energy consumption. To further complicate the picture, it is very difficult to separately meter central services energy for tenants: lifts and air conditioning units are used for the whole building, not separate floors.

As a consequence, DEWHA provides the following advice to agencies which are entering into new lease arrangements:

- **Most agencies—especially those without plant equipment expertise—are encouraged to enter into a gross lease arrangement.** Within the negotiation, it should be made explicit that **no** costs associated with central services consumption should be recoverable from tenants, either directly, or as an ongoing expense. This ensures that all central services energy consumption is the exclusive responsibility of the building owner, thereby creating an incentive for owners to improve the efficiency of their building systems. Further, substantial new Australian Government leases are required to contain a Green Lease Schedule, which binds tenant and building owner into an agreement to use and manage the premises in as sustainable a manner as possible.
- **In some cases, such as for specific operational purposes, and where the agency has the expertise to manage plant equipment, they may benefit from a net lease arrangement.** They will then be responsible for all energy use in the building, although they may need to obtain the central services energy data from the building owner. Agencies should request that bills are passed on, or that they are given access to the energy data as well as costs, to ensure maximum knowledge and control over their central services energy use.

<sup>20</sup> In terms of reporting energy use with leases of this type, DEWHA advises agencies to treat these as gross leases, because there is insufficient information to accurately report central services energy use.

## Green Lease Schedules

Under the EEGO policy, all lease agreements and Memoranda of Understanding for new office buildings, major refurbishments and new leases over 2 000 m<sup>2</sup> must include a Green Lease Schedule. The Green Lease Schedule is a document which is designed to assist the implementation and ongoing compliance with the current performance standards in the EEGO policy. The current standard is a NABERS Energy rating of 4.5 stars, for all leases 2 000 m<sup>2</sup> and over, for two years or more. The five key elements of a Green Lease Schedule are:

- *Agreed energy performance standard—landlord and tenant maintain the specified NABERS energy rating for central services and tenant light and power respectively.*
- *Separate digital metering providing 30 minute data—allows tenants and building owners to readily identify their own energy usage and costs. The 30 minute data helps identify inefficient electricity use as well as system errors.*
- *A building management committee—consists of representatives of both tenant and building owners who meet quarterly to review and report on energy performance.*
- *An energy management plan—developed jointly between landlord and tenant, this includes strategies to achieve and maintain the target NABERS energy rating over the term of the lease.*
- *Remedial action or dispute resolution processes—enables non-compliance issues to be resolved between both parties without invoking more adversarial resolution processes.*

Attaching a Green Lease Schedule to a lease for a commercial building obliges both the tenant and building owner to work collaboratively towards achieving the operational NABERS Energy requirement. Where a leased premises is unlikely to achieve 4.5 stars, such as if there are specific operational requirements, or if the space is in a heritage building, an exception may be negotiated with DEWHA.

2007–08 is the first year in which DEWHA is able to report on the uptake of Green Lease Schedules by the Australian Government. Agencies report on their lease arrangements as part of their energy use data submission into OSCAR.

**In 2007–08, the Australian Government achieved an 89 per cent Green Lease Schedule compliance rate for new leases of 2 000 m<sup>2</sup> or more, with a duration of two or more years.**

In 2007–08, it was reported to DEWHA that there were 687 leases for office facilities with an area of 2 000 m<sup>2</sup> or more which are leased for two years or longer. The number of Green Lease Schedules included in this total was 62, or nine per cent of all applicable leases. Although this figure appears low, as noted above, the Green Lease Schedule was only introduced in September 2006, and applies to all *new* leasing or major refurbishment negotiations. The leasing cycle for the Australian Government ranges between 10 and 15 years.

In terms of *new* lease negotiations, Table 6 reveals that 75 per cent of all new eligible leases in 2007–08 contained a Green Lease Schedule, and 88 per cent of refurbishment contracts signed in 2007–08 specified a NABERS Energy rating (or equivalent) of 4.5 stars:

**Table 6** Australian Government new leases negotiated in 2007–08

<i>New Leases within 2007–08</i>	<i>Number</i>	<i>Percentage of total</i>
<b>New Leases for office facilities over 2 000 m<sup>2</sup> and longer than 2 years</b>	<b>53</b>	<b>100 %</b>
New leases that have a Green Lease Schedule	40	75 %
<ul style="list-style-type: none"> <li>• <i>New leases with a Green Lease Schedule that specified less than 4.5 stars NABERS Energy (or equivalent), and/or did not include all five elements of the Green Lease Schedule</i></li> </ul>	8	15 %
<ul style="list-style-type: none"> <li>• <i>Those which received DEWHA endorsed exceptions</i></li> </ul>	4	8 %
<ul style="list-style-type: none"> <li>• <i>Those without DEWHA endorsed exceptions</i></li> </ul>	4	8 %
New leases that do <b>not</b> have a Green Lease Schedule	13	25 %
<ul style="list-style-type: none"> <li>• <i>New leases that do not have a Green Lease Schedule but have DEWHA endorsed exceptions to all five elements of the Green Lease Schedule</i></li> </ul>	7	13 %
Number of new leases that are not subject to the Green Lease Schedule requirement (e.g. a lease with a tenanted area that is smaller than 2 000 m <sup>2</sup> )	277	n/a
<hr/>		
<i>Major Refurbishments within 2007–08</i>	<i>Number</i>	<i>Percentage of total</i>
<b>New design and construction contracts for refurbishments to office facilities, impacting at least 2 000 m<sup>2</sup> and is &gt;50 per cent of base building or tenanted area</b>	<b>43</b>	<b>100 %</b>
Refurbishments which specify NABERS 4.5 star energy rating	38	88 %
Refurbishments which did not specify NABERS 4.5 star energy rating or did not specify any energy requirement	5	12 %
<ul style="list-style-type: none"> <li>• <i>Refurbishments which received DEWHA endorsed exceptions</i></li> </ul>	1	2 %
<ul style="list-style-type: none"> <li>• <i>Those which did <b>not</b> receive DEWHA endorsed exceptions</i></li> </ul>	4	9 %

Notes: Figures in the percentage column may not add up due to rounding; figures in italics represent components of subtotals, and should not be counted towards overall totals.

In addition to the 40 new leases which included Green Lease Schedules, a further seven leases received DEWHA endorsed exceptions to all elements of the schedule, thereby bringing the total compliance rate to 89 per cent. Five agencies, which accounted for six new leases, were non compliant, meaning that the agencies either did not apply for an exception or their exception was not accepted by DEWHA.

The use of tenant advocates in lease negotiation is very common, with 73 per cent of agencies reporting that they always, or sometimes, used a tenant advocate. On the other hand, specific negotiations for Green Lease Schedules were normally carried out by the agencies themselves (68 per cent reported this approach). 27 per cent of agencies reported that both agencies and tenant advocates were involved in these negotiations. These findings suggest that there may be opportunities to provide more Green Lease

information to tenant advocates so that they can more effectively represent their agencies' interests in relation to obtaining energy efficient office spaces.

For more details about Green Lease Schedules and the EEGO policy please go to:

<http://www.environment.gov.au/settlements/government/eego/index.html>

or contact the EEGO policy helpline on: (02) 6274 1350.

## Other Uses

This category includes the energy consumption of facilities that do not fit into any of the other categories. It includes Antarctic Bases and Other Uses (not further defined). Together, these two categories accounted for 95 230 GJ of energy used, or less than two per cent of the Australian Government's total (non-Defence) energy use.

### Antarctic Bases

#### Summary Statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	66 809 GJ	1.32 %	–14.13 %	<b>Decreasing</b>

The Antarctic Bases category includes all energy consumed in operating bases in Antarctica. It does not include the fuel used in supply ships, which is included under Other Transport. While there was a slight increase in energy use between 2006–07 and 2007–08, over the longer term energy use in this category has declined.

Energy used on the Antarctic Bases is for a variety of purposes, which means that there is no common business measure (such as m<sup>2</sup>) which can be used to produce intensity figures. Consequently there is no energy intensity data for this category.

### Other Uses (not further defined)

#### Summary Statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	28 421 GJ	–11.86 %	–63.12 %	<b>Decreasing</b>

Typical facilities reported under this category are sporting grounds, fountains, street lighting and so on. As with the previous category, the Other Uses category is too diverse for a single appropriate business measure to be applied, so there is no key indicator for energy efficiency.

In 2006–07, the Australian Sports Commission reclassified energy use for its swimming pools and other facilities from this category to the Other Buildings category, which resulted in a dramatic decrease in energy used. The continued decrease in energy use between 2006–07 and 2007–08 has been due to the re-classification of dog detection units used by the Australian Customs Service into the Other Buildings category. Consequently, the reduction in energy use in this category is largely a reduction in reported energy.

## Transport Energy

Total transport energy consists of two categories: Passenger Vehicles and Other Transport. As the discussion below will show, these two categories have quite different trends.

### Passenger Vehicles

#### Summary Statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	619 742 GJ	–8.36 %	–8.97 %	<b>Decreasing</b>
<b>Energy intensity</b>	3.68 MJ/km/annum	–4.06%	9.98 %	<b>Increasing</b>

Passenger Vehicles accounted for a little under 11 per cent of the Australian Government's total (non-Defence) energy consumption. The indicator MJ/km is used rather than L/100km to account for different fuels (petrol, diesel, LPG, natural gas) that are aggregated in the energy consumption data.

Over time the energy intensity of passenger vehicles has been extremely volatile; overall the trend shows an increase. However, a closer examination of recent performance—specifically from 2005 onwards—reveals intensity is declining. This recent decline may be attributed to the informed selection of more energy efficient vehicles within Government Fleets and the target set in 2003.<sup>21</sup>

Overall energy use in the Passenger Vehicles category has decreased since 1999–2000.

More consistent results over the past few years may be credited to the increased accuracy of reporting due to the education of drivers and policies within agencies regarding transport use. Individual agency performance in this category is summarised in Annex B.9.

<sup>21</sup> In 2003 an APS Roundtable discussion noted a proposal by the Australian Greenhouse Office for 28 per cent of the Australian Government fleet to attain a score of 10.5 or above on the Green Vehicle Guide by 2005.

## The Green Vehicle Guide (GVG) Rating

The Green Vehicle Guide (GVG) provides all new vehicles up to 3.5 tonnes gross vehicle mass with a rating based upon overall environmental performance. Older vehicles (pre-2004) are not listed; agencies are advised to compare these vehicles to current models and estimate the GVG score.

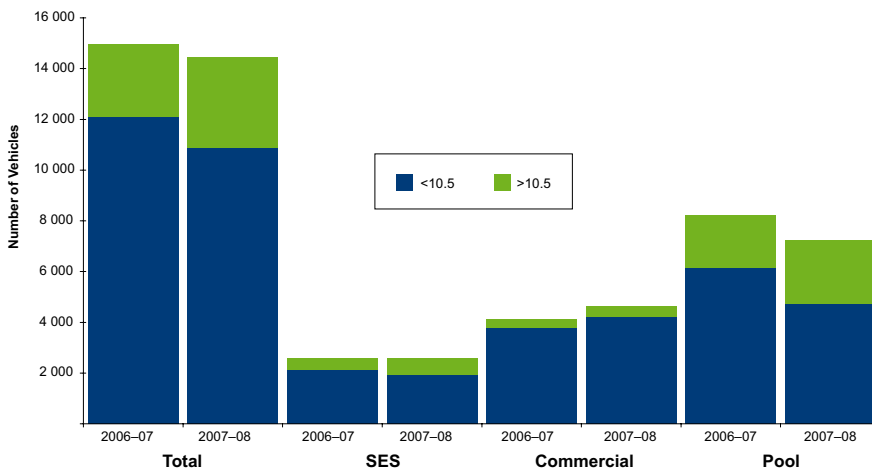
This report deals with all lease plan and agency owned vehicles—including Defence's fleet of approximately 5 000 non-military vehicles. It does not include short term or novated lease vehicles. Although there has been a considerable improvement in the overall environmental performance of vehicles between this year and last,<sup>22</sup> the December 2005 target (see footnote 21) is yet to be reached. In 2007–08, 25 per cent of the Australian Government's vehicles achieved a GVG rating of 10.5 or more.

GVG performance for the Passenger Vehicles category in 2007–08 is illustrated in Figure 7. It shows that 25 per cent of SES vehicles, nine per cent of commercial vehicles and 34 per cent of pool vehicles scored equal to or above 10.5 on the GVG.

The comparison between 2006–07 and 2007–08 indicates that the total number of passenger vehicles has reduced; this drop is largely due to a 12 per cent reduction of pool vehicles. Figure 7 also indicates that the improved rate of vehicles scoring greater than or equal to 10.5 in the GVG is also influenced by the selection of SES and pool vehicles as they are upgraded.

The GVG is available online at [www.greenvehicleguide.gov.au](http://www.greenvehicleguide.gov.au)

**Figure 7** Government Fleet Green Vehicle Guide performance



<sup>22</sup> The number of vehicles reported for 2006–07 has been revised. The total percentage of vehicles that scored equal to or greater than 10.5 in the GVG was 19%, down from 23% as reported in *Energy Use in the Australian Government Operations 2006–2007*.

## Other Transport

### Summary Statistics

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Energy use</b>	887 783 GJ	56.89 %	44.19 %	<b>Increasing</b>

The Other Transport category accounted for 15 per cent of the Australian Government's total (non-Defence) energy use in 2007–08. This category includes a variety of transport modes, such as aircraft used for surveying, large vehicles used for outback and rugged terrain, and ships used for customs duty or transport.<sup>23</sup>

Because this category is so diverse, it is not possible to measure energy intensity. There is no business measure common to all energy use in this category. Other transport energy consumption increased by almost 57 per cent between 2006–07 and 2007–08. However, as noted previously, the Australian Customs Service reported aviation fuel used in its air operations for the first time in 2007–08; data had previously not been available, resulting in an increase in *reported* transport energy.

<sup>23</sup> As noted at the outset, this does not extend to any transport that the Australian Government does not directly lease or own, and so excludes any public transport, by air, train, bus or taxi.

## Emissions Performance

In 2007–08, the activities of the Australian Government (including Defence Operational Fuel Use in Australia and Defence Establishments<sup>24</sup>) produced greenhouse gas emissions equivalent to 2 829 583 tonnes of CO<sub>2</sub> (hereafter abbreviated to CO<sub>2</sub>-e). To give this some perspective, these greenhouse emissions would have amounted to less than one per cent of the total energy-related greenhouse emissions in Australia in 2006.<sup>25</sup>

As noted at the outset, this year, emissions data is more comprehensive than in previous years, so the figure is substantially higher than what was reported last year.<sup>26</sup> However, using this more accurate calculation to re-estimate previous years, greenhouse gas emissions resulting from the operations of the Australian Government (including Defence Operational Fuel Use in Australia) have been declining over time, as the following box shows:

### Summary Statistics — total Australian Government (including Defence Operational Fuel Use in Australia)

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Emissions</b>	2 829 583 tonnes CO <sub>2</sub> -e	-1.38 %	-16.74 %	<b>Decreasing</b>
<b>Emissions Intensity</b>	135 kg CO <sub>2</sub> -e per GJ	-1.07 %	12.97 %	<b>Increasing</b>

In parallel with the structure of the beginning of this report, the following summary boxes divide the Australian Government's greenhouse gas emissions into the three main categories of energy use outlined earlier: Defence Operational Fuel Use in Australia; Defence Establishments and the Rest of Government (non-Defence).

### Summary Statistics — Defence Operational Fuel Use in Australia

	2007–08	Change from 2006–07 (% change)	Long term change 1999–2000 to 2007–08 (% change)	
<b>Emissions</b>	895 661 tonnes CO <sub>2</sub> -e	-3.97 %	-41.72 %	<b>Decreasing</b>
<b>Emissions Intensity</b>	76 kg CO <sub>2</sub> -e per GJ	-1.61 %	-1.64 %	<b>Decreasing</b>

<sup>24</sup> Note that Defence Operational Fuel Use in Australia was included in emissions data in previous iterations of this report; hence these data do not present a substantial departure from previous analyses.

<sup>25</sup> Most recent available data—see Department of Climate Change *National Greenhouse Inventory 2006*, at [www.climatechange.gov.au](http://www.climatechange.gov.au). Note: Energy includes Stationary Energy, Transport Energy and Fugitive Emissions.

<sup>26</sup> In previous reports, the majority of greenhouse gas emissions were calculated by applying national average greenhouse coefficients to the total consumption of each fuel type. By using a national average coefficient for electricity, the calculated emissions have been approximate, due to the different ways that electricity is generated in each state or territory. Where possible, for this 2007–08 report, electricity emissions have been calculated with reference to the appropriate state or territory. All agencies will be required to enter their data by state and territory in the 2008–09 reporting year.

**Summary Statistics — Defence Establishments**

	<i>2007–08</i>	<i>Change from 2006–07 (% change)</i>	<i>Long term change 1999–2000 to 2007–08 (% change)</i>	
<b>Emissions</b>	776 855 tonnes CO <sub>2</sub> -e	-4.75 %	-1.69 %	<b>Decreasing</b>
<b>Emissions Intensity</b>	236 kg CO <sub>2</sub> -e per GJ	-2.93 %	-2.50 %	<b>Decreasing</b>

**Summary Statistics — Rest of Government (non-Defence)**

	<i>2007–08</i>	<i>Change from 2006–07 (% change)</i>	<i>Long term change 1999–2000 to 2007–08 (% change)</i>	
<b>Emissions</b>	1 157 068 tonnes CO <sub>2</sub> -e	3.22 %	7.99 %	<b>Increasing</b>
<b>Emissions Intensity</b>	196 kg CO <sub>2</sub> -e per GJ	-1.76 %	-2.68 %	<b>Decreasing</b>

**Emissions intensity by fuel type and end use category**

Emissions intensity is a similar concept to energy intensity—it enables the environmental impact of an energy source to be determined by measuring the emissions associated with it. Different fuel types produce differing amounts of CO<sub>2</sub>-e. For example, the emissions intensity of electricity is approximately four times higher than primary fuels like natural gas and petrol. This is because the bulk of electricity in Australia is produced from burning coal, which is an emissions-intensive fuel source. Table 7 breaks down Australian Government energy use and emissions by fuel type. It reveals that electricity is the most emissions intensive energy source used by the Australian Government, at 293 kg of CO<sub>2</sub>-e for every GJ. Table 7 also presents Defence Operational Fuel Use in Australia as a subcategory to the four fuels this category consumes. In 1999–2000, electricity accounted for less than 20 per cent of the total energy used by the Australian Government in Australia; by 2007–08, this had risen to almost 29 per cent, which has resulted in a rise in emissions intensity for the Australian Government overall.

**Table 7** Australian Government energy consumption and greenhouse gas emissions by fuel type, 2007–08

	Energy use		Emissions		Emissions intensity
	GJ	% of total	Tonnes (CO <sub>2</sub> -e)	% of total	kg CO <sub>2</sub> -e/GJ
Electricity	6 217 833	29.70	1 821 738	64.38	293
Fuel oil	141	0.00	11	0.00	80
Automotive diesel (total)	4 664 153	22.28	355 905	12.58	76
<i>Automotive diesel used in Defence Operational Fuel Use in Australia</i>	4 225 022	20.18 <sup>(a)</sup>	322 397	11.39 <sup>(a)</sup>	76
Aviation turbine fuel (total)	7 432 633	35.50	566 419	20.02	76
<i>Aviation turbine fuel used in Defence Operational Fuel Use in Australia</i>	7 416 562	35.42 <sup>(a)</sup>	565 195	19.97 <sup>(a)</sup>	76
Aviation gasoline (AVGAS) (total)	382 936	1.83	28 379	1.00	74
<i>Aviation gasoline used in Defence Operational Fuel Use in Australia</i>	68 252	0.33 <sup>(a)</sup>	5 058	0.18 <sup>(a)</sup>	74
Automotive gasoline (total)	567 624	2.71	41 475	1.47	73
<i>Automotive gasoline used in Defence Operational Fuel Use in Australia</i>	41 218	0.20 <sup>(a)</sup>	3 011	0.11 <sup>(a)</sup>	73
E-10 (Biofuel)	25 667	0.12	1 830	0.06	71
Gas oil	96 279	0.46	6 740	0.24	70
Special Antarctic blend	66 520	0.32	4 656	0.16	70
Liquefied petroleum gas	123 882	0.59	8 246	0.29	67
Other natural gas liquids	100 161	0.48	6 611	0.23	66
Natural gas	1 259 126	6.01	80 844	2.86	64
Greenhouse Friendly Electricity	-59 713	n/a	-9 740	-0.34	0
Greenpower	-288 256	n/a	-83 532	-2.95	0
<b>Australian Government Overall</b>	<b>20 936 953<sup>(b)</sup></b>	<b>100<sup>(b)</sup></b>	<b>2 829 583<sup>(b)</sup></b>	<b>100<sup>(b)</sup></b>	<b>135<sup>(c)</sup></b>

Table notes:

(a) Percentage is of Australian Government totals, not the total of that fuel type.

(b) As Defence Operational Fuel Use in Australia has been included in this table to show how much it uses of the totals of each fuel type, these figures are not counted again towards the totals for the Australian Government overall.

(c) This value is the average emissions intensity of all energy sources used in the Australian Government's operations.

The fact that different fuels have such varying greenhouse gas impacts is important when considering how to most effectively reduce the Australian Government's environmental impact. Although any reduction in energy use results in a real reduction in emissions, reducing electricity usage in buildings has a comparatively larger impact than reductions in the use of natural gas, for example. Table 8 shows greenhouse gas emissions, intensities and trends by end use category.

**Table 8** Australian Government energy consumption, greenhouse gas emissions and intensities by end use category, 1999–2000 to 2007–08

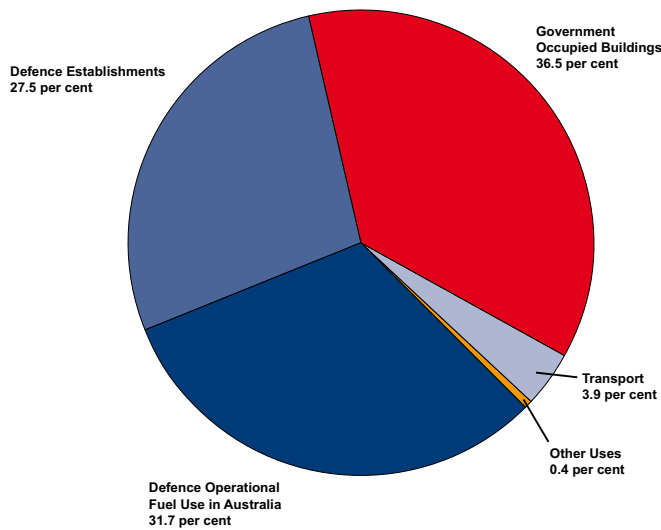
	<b>Energy use</b>		<b>Emissions</b>		<b>Emissions intensity</b>	
	2007–08	2007–08	1999–2000 to 2007–08	2007–08	1999–2000 to 2007–08	
	GJ	Tonnes CO <sub>2</sub> -e	% change	kg CO <sub>2</sub> -e /GJ	% change	
Defence Operational Fuel Use in Australia	11 751 054	895 661	–42	76	–2	
Defence Establishments	3 295 706	776 855	–2	236	–3	
Office—Tenant Light and Power	1 333 661	371 890	–3	279	–5	
Laboratories	921 382	192 878	–2	209	–6	
Other Buildings	688 817	169 846	7	247	2	
Office—Central Services	643 997	138 139	23	215	–1	
Public Buildings	344 075	67 447	6	196	–1	
Other Transport	887 783	65 382	46	74	1	
Computer Centres	199 957	55 609	n/a	278	n/a	
Passenger Vehicles	619 742	45 314	–10	73	–1	
Law Courts	108 034	28 183	7	261	4	
Climate Controlled Stores	47 516	10 016	–32	211	–2	
Other Uses	28 421	7 688	–50	271	36	
Antarctic Bases	66 809	4 676	–14	70	0	
<b>Australian Government Total</b>	<b>20 936 953</b>	<b>2 829 583</b>	<b>–17</b>	<b>135*</b>	<b>13</b>	

\* Note, this value represents the average emissions intensity of all energy sources used in the Australian Government's operations.

Table 8 also identifies emissions intensities across end use categories. While Defence Operational Fuel Use in Australia consumes the largest amount of energy compared with any other end use category, its emissions footprint is not much larger than Defence Establishments, although the latter uses approximately one quarter of the energy of Defence Operational Fuels. In fact, the most emissions intensive end use categories are buildings powered with electricity, with TLP and Computer Centres at the top of the list.

Government occupied buildings are the largest source of emissions for the Australian Government, at 36.5 per cent of total CO<sub>2</sub>-e emissions.<sup>27</sup> Figure 8 shows the emissions impacts of the five major categories of Australian Government energy use in 2007–08.

<sup>27</sup> These figures were derived as follows. Summing the total emissions produced as a result of powering the buildings occupied by the Australian Government's agencies and departments, produced a figure of 1 034 008 tonnes of CO<sub>2</sub>-e in 2007–08. This compares with 895 661 tonnes of CO<sub>2</sub>-e for Defence Operational Fuel Use in Australia and 776 855 tonnes of CO<sub>2</sub>-e for Defence Establishments.

**Figure 8** Australian Government emissions by major category, 2007–08

*Government Occupied Buildings* include: Office—Tenant Light and Power, Office—Central Services, Computer Centres, Climate Controlled Stores, Laboratories, Law Courts, Public Buildings, and Other Buildings.

*Transport* includes: Passenger Vehicles and Other Transport.

*Other Uses* include: Other Uses and Antarctic Bases.

While Defence Operational Fuel Use in Australia is outside the range of the EEGO policy, the key point to take from Figure 8 is that reductions in energy use in Government Occupied Buildings and Defence Establishments will make a significant difference to the emissions footprint of the Australian Government. Consequently, this report makes the following observations:

- All agencies, whether large or small, have the ability to make a substantial difference to the emissions footprint of the Australian Government by improving energy efficiency.
- Systems and processes, such as mandating simple saving behaviours among staff can make a major difference over time, such as turning off at the wall: all lights, computers (including screens), printers and copy equipment at night and weekends.
- Joining public awareness campaigns, such as Earth Hour, assists in raising staff awareness more generally. It is suggested that departments and agencies use these events to substantially contribute to staff knowledge of energy use in both the office and at home:
  - *In 2008, 96 per cent of all Australian Government agencies signed up for Earth Hour 2008.*
  - *In 2009, 100 per cent of all Australian Government agencies signed up for Earth Hour 2009.*
- Agencies should, where possible, attempt to reduce overall energy consumption, rather than simply focusing on energy intensities.

Reductions in transport energy, while also important, have a much smaller impact on greenhouse emissions than stationary energy powered with electricity.

## Agency Performance

### Emissions by agency

Table 9 lists the 20 agencies with the largest emissions footprints. In the main, higher emissions are associated with higher levels of energy use but there are exceptions. Both Centrelink and the Australian Taxation Office have larger emissions footprints than the Australian Customs Service, although Customs consumes almost double the amount of energy of each of the other two agencies. This is because Centrelink and the Australian Taxation Office have higher emissions intensities (232 and 238 kg of CO<sub>2</sub>-e per GJ respectively) than the Australian Customs Service (96 kg of CO<sub>2</sub>-e per GJ), due to the bulk of Customs' energy being used for transport.

**Table 9** Energy use of the 20 highest energy using agencies, 2007–08

	<i>Energy Use</i>	<i>Emissions</i>		<i>Emissions intensity</i>
	<i>2007–08</i>	<i>2007–08</i>	<i>2006–07 to 2007–08</i>	<i>2007–08</i>
	GJ	Tonnes CO <sub>2</sub> -e	% change	kg CO <sub>2</sub> -e/GJ
Defence Operational Fuel Use in Australia	11 751 054	895 661	-3.97	76
Department of Defence (excluding Defence Operational Fuel Use in Australia)	3 967 732	921 034	-3.64	232
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	704 608	133 411	-0.68	189
Centrelink	395 754	91 651	-0.52	232
Australian Taxation Office	335 290	86 641	2.65	258
Australian Customs Service	734 203	70 162	41.45*	96
Australian Broadcasting Corporation	201 950	49 933	2.74	247
Australian Nuclear Science & Technology Organisation	127 676	36 260	-13.06	284
Australian Federal Police	173 232	32 881	-7.50	190
Department of the Environment, Water, Heritage and the Arts	329 549	25 565	13.60	78
Department of Immigration and Citizenship	100 632	24 143	-2.69	240
Department of Parliamentary Services	132 715	22 635	-4.07	171
Commonwealth Law Courts	79 865	20 122	-6.50	252
Department of Education, Employment and Workplace Relations	75 203	18 491	-6.39	246
Bureau of Meteorology	55 904	17 305	-1.60	310
Department of Finance and Deregulation	87 563	16 748	148.26	191

**Table 9** Energy use of the 20 highest energy using agencies, 2007–08 (continued)

	<b>Energy Use</b>		<b>Emissions</b>	
	<b>2007–08</b>	<b>2007–08</b>	<b>2006–07 to 2007–08</b>	<b>Emissions intensity 2007–08</b>
	GJ	Tonnes CO <sub>2</sub> -e	% change	kg CO <sub>2</sub> -e/GJ
Department of Agriculture, Fisheries and Forestry	86 378	16 742	23.61	194
Department of Foreign Affairs and Trade	64 728	16 039	-2.37	248
Department of Innovation, Industry, Science and Research	68 188	15 848	-5.86	232
Australian Security Intelligence Organisation (ASIO)	70 994	15 574	12.16	219
Medicare Australia	69 354	14 992	-0.56	216

\* The Australian Customs Service shows a 41 per cent increase in emissions from the previous year because of the inclusion of aviation fuel used in its air operations for the first time in the 2007–08 data. As such, this represents an increase in reported energy use and emissions, rather than an actual increase in either.

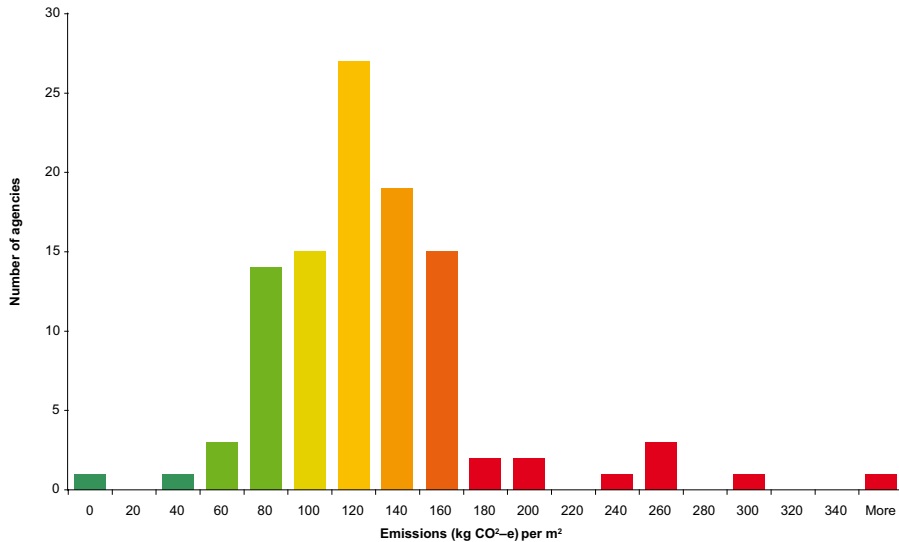
Because emissions intensity varies considerably depending on the fuel used, the emissions intensity of agencies should only be compared on a like with like basis. Consequently, Figure 9 highlights the emissions used in the category of TLP, which almost all agencies report under. Rather than report emissions per GJ for TLP, Figure 9 shows emissions per m<sup>2</sup>, which gives an indication of both emissions intensity and the efficiency of each agency's operations in their office space.

Those agencies which have very low emissions per square metre are performing at a level equivalent to a star rating of five or more. One agency is currently carbon neutral in TLP, meaning that electricity used in its office space results in no emissions. This agency is the Department of Climate Change, which purchases 100 per cent of its office electricity as Greenpower. The agency with the second lowest emissions footprint for TLP is DEWHA, which purchased 72 per cent of its TLP electricity as Greenpower in 2007–08. Note that, as shown in Annex B.1, both of these agencies also score strongly in terms of energy efficiency in this category (MJ per m<sup>2</sup> and per person), so their performance is not solely attributable to Greenpower.

The peak of the distribution in Figure 9 is between 100 and 120 kg CO<sub>2</sub>-e/m<sup>2</sup>, which is close to the Australian Government average of 112 kg CO<sub>2</sub>-e/m<sup>2</sup> per year. The red colour indicates poor emissions performance, equivalent to one star or worse.

In addition to the two agencies noted above, the best performing agencies in 2007–08 include: the Workplace Authority; Australian Public Service Commission; Office of the Workplace Ombudsman; Christmas Island Administration; Office of Parliamentary Counsel; Land & Water Australia; Geoscience Australia; Therapeutic Goods Administration; and Corporations and Markets Advisory Committee.

**Figure 9** 2007–08 Office—Tenant Light and Power emissions intensity: distribution of all agencies which reported this category



### Greenpower uptake in the Australian Government

Electricity sourced from accredited renewable sources is termed Greenpower. Greenhouse Friendly Electricity is another product where offsets are purchased to counteract the emissions produced from the use of electricity. These offsets are commonly in the form of tree plantations. Agencies which buy a proportion of their electricity as Greenpower or Greenhouse Friendly Electricity are able to enter this information into OSCAR as an emissions offset. All of the emissions data presented in this section has taken account of Greenpower and Greenhouse Friendly Electricity.

The amount of Greenpower purchased by the Australian Government has increased substantially over time, from 6 446 662 kWh in 1999–2000 to 80 071 045 kWh in 2007–08. This is an increase of 1 142 per cent (or an approximately 11 fold increase). Between 2006–07 and 2007–08 the Australian Government's use of Greenpower increased by 32 per cent. Agencies which sign up to the ACT Whole of Government Electricity Contract purchased 10 per cent of their electricity as Greenpower in 2007–08. The overall total percentage of Greenpower in all government buildings was just under 4.5 per cent in 2007–08.

## Key Findings

1. *The Australian Government has improved its energy efficiency over the short and longer term, and now operates its office spaces more efficiently than the market average.*

- This report finds that in 2007–08, the Australian Government **has improved its overall energy efficiency** since 2006–07. Specifically, energy efficiency improvements have been achieved in the following end use categories:

- **Office—Tenant Light and Power** (five per cent improvement over 2006–07)
- **Office—Central Services** (four per cent improvement over 2006–07)
- **Public Buildings** (five per cent improvement over 2006–07)
- **Computer Centres** (74 per cent improvement over 2006–07)<sup>28</sup>
- **Law Courts** (three per cent improvement over 2006–07)
- **Climate Controlled Stores** (six per cent improvement over 2006–07)
- **Other Buildings** (16 per cent improvement over 2006–07)
- **Passenger Vehicles** (four per cent improvement over 2006–07)

- Further, for all categories except Passenger Vehicles, this improving trend was observable over the longer term, that is, since 1999–2000.
- The only category which saw an increase in energy intensity was Laboratories. As this category accounts for a substantial amount of building energy use in the Australian Government (it is the second largest category after Tenant Light and Power) DEWHA recommends that agencies which report in this category prioritise strategies to reduce overall energy use and improve energy efficiency in their laboratories.
- 30 per cent of all Australian Government agencies reporting Office—Tenant Light and Power have already achieved the *Energy Efficiency in Government Operations* policy target of 7 500 MJ/person/annum. 40 per cent of agencies reporting Office—Central Services have already achieved the target of 400 MJ/m<sup>2</sup>/annum.
- By 2007–08, the Australian Government as a whole had achieved an energy intensity for Office—Tenant Light and Power of 8 113 MJ/person, and for Office—Central Services it had reached 461 MJ/m<sup>2</sup>. It is possible that by June 2011 the *Energy Efficiency in Government Operations* policy targets for these categories will be reached by the Australian Government on average if the rate of energy efficiency improvement seen between 2006–07 and 2007–08 continues in the coming years. However, the longer term trends in both of these categories have been volatile so agencies will need to closely monitor their energy use to ensure the improving trends continue.

<sup>28</sup> Computer Centres were introduced as a reporting category in 2006–07: this dramatic improvement in intensity can be attributed to improved reporting accuracy and the reallocation of energy use previously reported in other end use categories into the Computer Centres category.

Further, even if the Australian Government achieves these targets on *average*, that is, across all agencies, then this may still mean a substantial number of agencies will not have met the targets by June 2011.

- 8 113 MJ/person/annum and 400 MJ/m<sup>2</sup>/annum for Office—Tenant Light and Power represent good energy efficiency in Australian Government tenancies. 461 MJ/m<sup>2</sup>/annum for Office—Central Services is very good average performance for this category.
  - In 2007–08 the Australian Government achieved a Green Lease Schedule compliance rate of 89 per cent for new leases of 2 000 m<sup>2</sup> or more with a duration of two or more years.
2. *There is wide variation between Australian Government agencies in terms of their efficient use of energy.*
- Some agencies have achieved excellent energy efficiency in their operations, and several office spaces are operating at 4.5 stars or more.
  - On the other hand, there are some agencies which have very poor energy performance and whose office spaces are operating at less than one star, well below the market average.
  - Office spaces and buildings with very poor energy efficiency performance often offer the greatest scope for simple, low cost energy savings strategies.
3. *Total Australian Government energy use has declined substantially since 1999–2000; however, this is due to reductions in Defence Operational Fuel Use in Australia. In fact, energy use in Defence Establishments and the rest of the Australian Government's operations has increased over the same time frame.*
- Defence Operational Fuel Use in Australia has reduced by more than 40 per cent since 1999–2000, and by more than two per cent since 2006–07.
  - Defence Establishments saw a slight decrease in energy use since 2006–07, but this has increased slightly since 1999–2000.
  - The rest of the Australian Government's operations saw an increase in energy use of five per cent between 2006–07 and 2007–08, and almost 11 per cent between 1999–2000 and 2007–08.
4. *An increase in the number of Australian Government public servants over the short and longer terms has seen a smaller, but significant, increase in non-military energy use*
- Since 1999–2000, the number of public servants increased by 41 per cent, while total Australian Government Energy Use (excluding Defence Operational Fuel Use in Australia) increased by just over seven per cent.

5. *Because of the greater greenhouse impact of electricity than other fuel sources, the greatest potential for reducing the Australian Government's carbon footprint is by reducing energy use in buildings.*
  - Managing growth in absolute energy use in Australian Government occupied buildings is an important challenge. All building end use categories except Climate Controlled Stores have increased their energy use since 1999–2000.
  - Australian Government Occupied Buildings accounted for higher greenhouse gas emissions than either Defence Establishments or Defence Operational Fuel Use in Australia.

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## Acronyms

CO <sub>2</sub> -e	Carbon dioxide equivalent. Greenhouse gases are usually a mixture of carbon dioxide (CO <sub>2</sub> ), and others including methane (CH <sub>4</sub> ) and nitrous Oxide (NO <sub>2</sub> )
CS	Office—Central Services
DEWHA	The Department of the Environment, Water, Heritage and the Arts
GVG	The Green Vehicle Guide
NABERS	National Australian Built Environment Rating System
TLP	Office—Tenant Light and Power

## Energy conversion factors

<i>Energy Type</i>	<i>Typically Measured Units</i>	<i>Abbreviation</i>	<i>To convert to megajoules (MJ), multiply by:</i>	<i>To convert to gigajoules (GJ), multiply by:</i>
<b>Electricity/ Greenpower</b>	kilowatt hour	kWh	3.6	0.0036
<b>Natural gas</b>	megajoule	MJ	–	0.001
<b>LPG</b>	litre	L	25.7	0.0257
<b>Heating Oil/Fuel Oil</b>	litre	L	40.8	0.0408
<b>Automotive Diesel</b>	litre	L	38.6	0.0386
<b>Petrol</b>	litre	L	34.2	0.0342
<b>Aviation Turbine Fuel</b>	litre	L	36.8	0.0368
<b>AVGAS</b>	litre	L	33.1	0.0331
<b>Gas Oil</b>	tonnes	t	44 697.6	44.6976
<b>Special Antarctic Blend</b>	tonnes	t	46 258.4	46.2584

### Style note

In this report, all end use categories (e.g. Office—Tenant Light and Power) are capitalised; however, when the terms are used in general, and do not specifically refer to the end use category, they are not capitalised.

Similarly, titles like the Australian Government are capitalised, but the terms 'government', 'state' and 'territory' used in a general sense are not capitalised.

The abbreviation MJ/person/annum is used to represent MJ used *per person per year*. In mathematical terms this is more accurately presented as MJ/person.annum. The former abbreviation is used in this report because it is more common and hence more accessible to a non-specialist readership.

## Departments and Agencies listed by Portfolio

Following is a list of the Departments and Agencies who contributed to the 2007–08 report.

<i>Portfolio</i>	<i>Department/Agency</i>	
<b>Agriculture Fisheries and Forestry Portfolio</b>	Australian Fisheries Management Authority	
	Australian Pesticides and Veterinary Medicines Authority	
	Dairy Adjustment Authority	
	Department of Agriculture, Fisheries and Forestry	
	Land & Water Australia	
	Rural Industries Research and Development Corporation	
	Wheat Exports Authority	
	<b>Attorney–General's Portfolio</b>	Administrative Appeals Tribunal
		Attorney–General's Department
		Australian Commission for Law Enforcement Integrity
Australian Crime Commission		
Australian Customs Service		
Australian Federal Police		
Australian Government Solicitor		
Australian Institute of Criminology		
Australian Law Reform Commission		
Australian Security Intelligence Organisation (ASIO)		
Australian Transaction Reports and Analysis Centre		
Commonwealth Director of Public Prosecutions		
Commonwealth Law Courts		
CrimTrac Agency		
Family Court of Australia		
High Court of Australia		
Human Rights & Equal Opportunity Commission		
Insolvency and Trustee Service, Australia		
Jervis Bay Territory Administration		
Law Courts Limited		
National Capital Authority		
National Native Title Tribunal		
Office of Parliamentary Counsel		

<i>Portfolio</i>	<i>Department/Agency</i>	
<b>Broadband, Communications and the Digital Economy Portfolio</b>	Australian Broadcasting Corporation	
	Australian Communications and Media Authority	
	Department of Broadband, Communications and the Digital Economy	
	Special Broadcasting Service	
<b>Defence Portfolio</b>	Australian War Memorial	
	Department of Defence	
<b>Education, Employment and Workplace Relations Portfolio</b>	Department of Veterans' Affairs	
	Australian Fair Pay Commission Secretariat	
	Australian Industrial Registry	
	Comcare Australia	
	Department of Education, Employment and Workplace Relations	
	Office of the Australian Building and Construction Commissioner	
	Office of the Workplace Ombudsman	
	Teaching Australia	
	Workplace Authority	
	<b>Environment, Water, Heritage and the Arts Portfolio</b>	Australian Film Commission
Australian Film, Television and Radio School		
Bureau of Meteorology		
Department of the Environment, Water, Heritage and the Arts		
Director of National Parks		
Film Finance Corporation Australia Ltd		
Great Barrier Reef Marine Park Authority		
National Gallery of Australia		
National Library of Australia		
National Maritime Museum of Australia		
National Museum of Australia		
National Water Commission		
<b>Families, Housing, Community Services and Indigenous Affairs Portfolio</b>		Department of Families, Housing, Community Services and Indigenous Affairs
		Equal Opportunity for Women in the Workplace Agency
	Social Security Appeals Tribunal	
	Torres Strait Regional Authority	
<b>Finance and Deregulation Portfolio</b>	Australian Electoral Commission	
	ComSuper	
	Department of Finance and Deregulation	
	Property Group	

*Portfolio***Foreign Affairs and Trade Portfolio***Department/Agency*

Australian Agency for International Development  
 Australian Centre for International Agricultural Research  
 Australian Trade Commission  
 Department of Foreign Affairs and Trade

**Health and Ageing Portfolio**

ARPANSA  
 Australian Institute of Health & Welfare  
 Australian Sports Anti-Doping Authority  
 Australian Sports Commission  
 Cancer Australia  
 Department of Health and Ageing  
 Food Standards Australia New Zealand  
 National Blood Authority  
 National Health and Medical Research Council  
 Private Health Insurance Ombudsman  
 Professional Services Review Scheme  
 Therapeutic Goods Administration

**Human Services Portfolio**

Australian Hearing  
 Centrelink  
 Child Support Agency  
 CRS Australia  
 Department of Human Services  
 Medicare Australia

**Immigration Portfolio**

Department of Immigration and Citizenship  
 Migration Review Tribunal–Refugee Review Tribunal

**Infrastructure, Transport, Regional Development and Local Government Portfolio**

Civil Aviation Safety Authority  
 Department of Infrastructure, Transport, Regional Development and Local Government

**Innovation, Industry, Science and Research Portfolio**

Australian Institute of Marine Science  
 Australian Nuclear Science & Technology Organisation  
 Australian Research Council  
 Christmas Island Administration  
 Commonwealth Scientific and Industrial Research Organisation (CSIRO)  
 Department of Innovation, Industry, Science and Research  
 IP Australia  
 National Science and Technology Centre (Questacon)

<i>Portfolio</i>	<i>Department/Agency</i>
<b>Parliamentary Departments Portfolio</b>	Department of Parliamentary Services
<b>Prime Minister and Cabinet Portfolio</b>	Australian Institute of Family Studies
	Australian National Audit Office
	Australian Public Service Commission
	Department of Climate Change
	Department of the Prime Minister and Cabinet
	National Archives of Australia
	Office of National Assessments
	Office of the Commonwealth Ombudsman
	Office of the Official Secretary to the Governor-General
	Office of the Privacy Commissioner
<b>Resources, Energy and Tourism Portfolio</b>	Department of Resources, Energy and Tourism
	Geoscience Australia
	National Offshore Petroleum Safety Authority
	Tourism Australia
<b>Treasury Portfolio</b>	Australian Bureau of Statistics
	Australian Competition and Consumer Commission
	Australian Prudential Regulation Authority
	Australian Securities and Investments Commission
	Australian Taxation Office
	Commonwealth Grants Commission
	Corporations and Markets Advisory Committee
	Department of the Treasury
	National Competition Council
	Office of the Inspector-General of Taxation
	Productivity Commission
	Royal Australian Mint
	Superannuation Complaints Tribunal
	Takeovers Panel

# Annex A

## 2007–08 Aggregate Data for the Australian Government

The following table summarises the performance of the Australian Government as a whole over the last five reporting periods. Greenpower and Greenhouse Friendly Electricity are shown in parentheses and are not counted in total energy use since they are already included in the electricity figures. These green electricity products are however accounted for when calculating emissions totals. For consistency, fuels that were originally reported in kilolitres (kL) or gigajoules (GJ) have been converted to litres (L) and megajoules (MJ) respectively.

Figures A.1 and A.2 display the Australian Government's total energy use and corresponding energy intensity in the end use categories of Office—Tenant Light and Power (TLP) and Office—Central Services (CS). The figures also give an indication of the trend over the past five years and how the Australian Government is tracking towards the *Energy Efficiency in Government Operations* (EEGO) Policy targets for these two categories.

Figure A.3 summarises the stationary and transport sectors' energy and emissions for the Australian Government as a whole. Note that Defence Establishments is included as part of stationary energy, but Defence Operational Fuel Use in Australia is excluded in this analysis, because it does not fit neatly into either of these sectors. Stationary energy accounts for the bulk of energy use in Figure A.3, and hence most of the CO<sub>2</sub>-e emissions. These are shown in red in Figure A.3. The blue colours represent transport energy and its associated CO<sub>2</sub>-e emissions. The proportions of transport energy to stationary energy in GJ are different for emissions, because of the lower emissions intensity (and hence, smaller greenhouse impact) of transport fuels.

	2003–04	2004–05	2005–06	2006–07	2007–08	Change from 2006–07
<b>Stationary Energy</b>						
<b>Office—Tenant Light and Power</b>						
Electricity (kWh)	310 706 828	330 734 755	341 218 694	361 329 483	417 465 832	15.54%
Greenhouse friendly electricity (kWh)				(5 832 486)	(8 245 080)	41.36%
Greenpower (kWh)	(6 971 756)	(8 769 461)	(15 133 201)	(12 070 282)	(16 302 996)	35.07%
Natural gas (MJ)	4.00	4.00	553 502	449 877	565 845	25.78%
<b>Total (GJ)</b>	<b>1 118 545</b>	<b>1 190 645</b>	<b>1 228 941</b>	<b>1 301 236</b>	<b>1 333 661</b>	<b>2.49%</b>
Area (m <sup>2</sup> )	2 683 259	2 659 996	2 875 420	3 087 164	3 330 888	7.89%
Occupancy (People)	130 402	136 774	142 805	151 400	164 384	8.58%
<b>MJ/m<sup>2</sup>/annum</b>	<b>417</b>	<b>448</b>	<b>427</b>	<b>421</b>	<b>400</b>	<b>–5.01%</b>
<b>MJ/person/annum</b>	<b>8 578</b>	<b>8 705</b>	<b>8 606</b>	<b>8 532</b>	<b>8 113</b>	<b>–4.91%</b>
m <sup>2</sup> /person	20.58	19.45	20.14	20.39	20.26	–0.63%

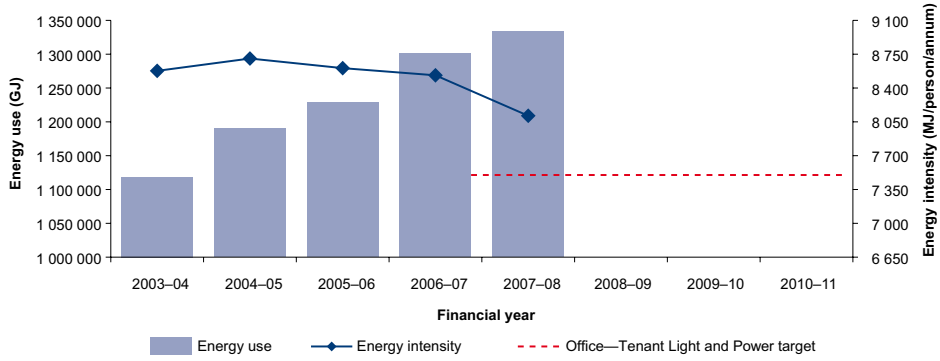
	2003–04	2004–05	2005–06	2006–07	2007–08	Change from 2006–07
<b>Stationary Energy (continued)</b>						
<b>Office—</b>						
<b>Central Services</b>						
Electricity (kWh)	101 960 520	101 193 193	122 099 550	122 832 377	160 035 710	30.29%
Greenhouse friendly electricity (kWh)				(4 216 427)	(8 042 104)	90.73%
Greenpower (kWh)	(2 002 192)	(2 452 134)	(7 046 455)	(4 445 341)	(5 873 739)	32.13%
LPG (L)	456	124	298	785		-100.00%
Natural gas (MJ)	160 593 499	174 794 916	178 683 624	186 548 887	201 695 809	8.12%
<b>Total (GJ)</b>	<b>527 663</b>	<b>539 094</b>	<b>618 250</b>	<b>628 766</b>	<b>643 997</b>	<b>2.42%</b>
Area (m <sup>2</sup> )	1 183 089	1 216 994	1 239 270	1 309 632	1 397 246	6.69%
<b>MJ/m<sup>2</sup>/annum</b>	<b>446</b>	<b>443</b>	<b>499</b>	<b>480</b>	<b>461</b>	<b>-4.00%</b>
<b>Antarctic Bases</b>						
LPG (L)	11 325	10 706	8 354	7 921	11 289	42.52%
Special Antarctic blend (tonnes)	1 445	1 780	1 418	1 421	1 438	1.19%
<b>Total (GJ)</b>	<b>67 134</b>	<b>82 615</b>	<b>65 818</b>	<b>65 941</b>	<b>66 809</b>	<b>1.32%</b>
<b>Climate</b>						
<b>Controlled Stores</b>						
Electricity (kWh)	9 053 363	8 947 368	9 392 108	9 871 263	8 829 652	-10.55%
Greenpower (kWh)	(131 902)	(135 215)	(302 927)	(313 625)	(413 409)	31.82%
Natural gas (MJ)	17 451 856	16 605 998	17 270 278	15 167 765	15 729 246	3.70%
<b>Total (GJ)</b>	<b>50 044</b>	<b>48 817</b>	<b>51 082</b>	<b>50 704</b>	<b>47 516</b>	<b>-6.29%</b>
Area (m <sup>2</sup> )	67 378	66 129	66 579	68 158	68 471	0.46%
<b>MJ/m<sup>2</sup>/annum</b>	<b>743</b>	<b>738</b>	<b>767</b>	<b>744</b>	<b>694</b>	<b>-6.72%</b>
<b>Computer Centres</b>						
Electricity (kWh)			18 613 399	31 994 359	63 985 228	99.99%
Greenpower (kWh)			(1 489 072)	(2 514 873)	(3 469 835)	37.97%
Natural gas (MJ)					471 420	100%
<b>Total (GJ)</b>			<b>67 008</b>	<b>115 180</b>	<b>199 957</b>	<b>73.60%</b>
Area (m <sup>2</sup> )				2 938	18 927	544.25%
<b>MJ/m<sup>2</sup>/annum</b>				<b>15 260</b>	<b>10 565</b>	<b>-30.77%</b>

	2003–04	2004–05	2005–06	2006–07	2007–08	Change from 2006–07
<b>Stationary Energy (continued)</b>						
<i>Laboratories</i>						
Automotive diesel (L)	2 064	1 546	2 494	220	205	–6.82%
Electricity (kWh)	186 855 582	176 889 864	176 391 506	176 926 383	175 449 104	–0.83%
Fuel oil (L)	1 500	9 131	766	848		–100.00%
Greenpower (kWh)	(6 544 598)	(10 533 329)	(11 414 396)	(10 546 844)	(11 426 201)	8.34%
LPG (L)	143 824	148 118	123 108	104 958	98 856	–5.81%
LPG (kg)		675			135	100%
Natural gas (MJ)	303 023 010	321 272 607	319 088 804	289 168 839	287 219 864	–0.67%
<b>Total (GJ)</b>	<b>979 540</b>	<b>962 348</b>	<b>957 390</b>	<b>928 844</b>	<b>921 382</b>	<b>–0.80%</b>
Area (m <sup>2</sup> )	851 798	882 419	858 080	847 922	791 805	–6.62%
<b>MJ/m<sup>2</sup>/annum</b>	<b>1 150</b>	<b>1 091</b>	<b>1 116</b>	<b>1 095</b>	<b>1 164</b>	<b>6.23%</b>
<i>Law Courts</i>						
Electricity (kWh)	23 788 791	23 323 244	25 091 822	26 044 444	25 629 011	–1.60%
Natural gas (MJ)	14 393 557	16 630 373	16 342 714	17 172 072	15 769 205	–8.17%
<b>Total (GJ)</b>	<b>100 033</b>	<b>100 594</b>	<b>106 673</b>	<b>110 932</b>	<b>108 034</b>	<b>–2.61%</b>
Area (m <sup>2</sup> )	167 785	167 748	173 823	177 689	177 944	0.14%
<b>MJ/m<sup>2</sup>/annum</b>	<b>596</b>	<b>600</b>	<b>614</b>	<b>624</b>	<b>607</b>	<b>–2.75%</b>
<i>Other Buildings</i>						
Automotive diesel (L)	493 263	514 287	580 743	880 805	771 779	–12.38%
Electricity (kWh)	161 659 272	161 253 274	170 926 245	181 204 174	159 201 610	–12.14%
Fuel oil (L)	11 470	5 206	12 658	3 500	3 500	0.00%
Greenhouse friendly electricity (kWh)				(151 207)	(16 161)	–89.31%
Greenpower (kWh)	(1 972 999)	(2 402 319)	(1 792 520)	(2 710 832)	(4 378 195)	61.51%
LPG (L)	77 393	66 937	86 021	104 938	81 566	–22.27%
LPG (kg)	1 215	1 035	675	180	180	0.00%
Natural gas (MJ)	62 429 595	40 580 084	38 817 784	81 393 309	89 790 930	10.32%
<b>Total (GJ)</b>	<b>665 960</b>	<b>642 927</b>	<b>679 329</b>	<b>770 576</b>	<b>688 817</b>	<b>–10.61%</b>
Area (m <sup>2</sup> )	802 226	838 858	899 262	1 024 897	1 101 941	7.52%
<b>MJ/m<sup>2</sup>/annum</b>	<b>830</b>	<b>766</b>	<b>755</b>	<b>752</b>	<b>625</b>	<b>–16.86%</b>

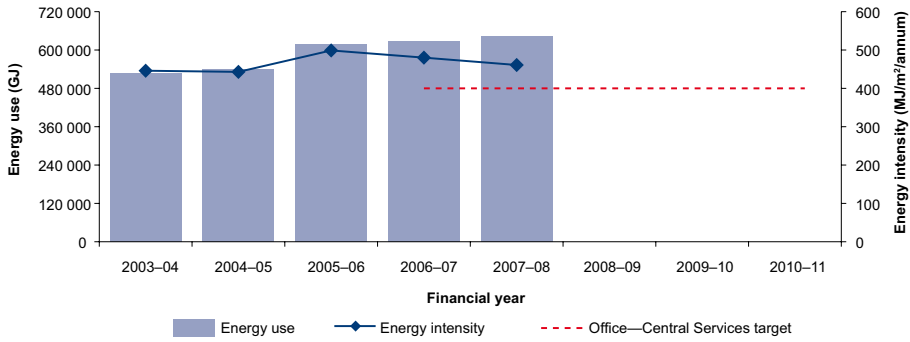
	2003–04	2004–05	2005–06	2006–07	2007–08	Change from 2006–07
<b>Stationary Energy (continued)</b>						
<b>Other Uses</b>						
Automotive diesel (L)	3 500	500				
Automotive gasoline (petrol) (L)			5 700	1 610	3 183	97.70%
Electricity (kWh)	13 012 326	12 514 998	17 306 838	8 727 145	7 673 131	-12.08%
Greenpower (kWh)	(880 684)	(738 303)	(845 224)	(253 613)	(436 439)	72.09%
LPG (L)	3 733	3 624	3 775	332		-100.00%
Natural gas (MJ)	37 264 500	34 240 706	32 940 465	764 105	689 030	-9.83%
<b>Total (GJ)</b>	<b>84 340</b>	<b>79 407</b>	<b>95 537</b>	<b>32 245</b>	<b>28 421</b>	<b>-11.86%</b>
<b>Public Buildings</b>						
Automotive diesel (L)	4 317	10 372	11 445	12 430	10 173	-18.16%
Electricity (kWh)	65 461 505	64 517 397	66 490 209	68 439 780	65 704 567	-4.00%
Greenhouse friendly electricity (kWh)				(241 807)	(283 736)	17.34%
Greenpower (kWh)	(3 897 601)	(3 895 500)	(4 578 437)	(8 279 905)	(8 812 273)	6.43%
LPG (L)	367	5 836	7 576	6 739	4 319	-35.91%
Natural gas (MJ)	120 144 143	117 025 647	127 146 967	112 278 640	107 035 094	-4.67%
<b>Total (GJ)</b>	<b>355 982</b>	<b>349 839</b>	<b>367 148</b>	<b>359 315</b>	<b>344 075</b>	<b>-4.24%</b>
Area (m <sup>2</sup> )	316 559	317 497	324 207	313 341	314 423	0.35%
<b>MJ/m<sup>2</sup>/annum</b>	<b>1 125</b>	<b>1 102</b>	<b>1 132</b>	<b>1 126</b>	<b>1 071</b>	<b>-4.84%</b>
<b>Defence Establishments</b>						
Electricity (kWh)	678 371 123	680 535 402	748 945 046	760 108 105	733 260 935	-3.53%
Greenpower (kWh)	(1 191 781)		(19 659 737)	(19 460 089)	(28 957 957)	48.81%
LPG (L)	3 306 224	3 953 193	4 198 784	3 784 199	3 883 487	2.62%
Natural gas (MJ)	534 785 347	506 224 006	620 741 501	525 080 783	556 547 695	5.99%
<b>Total (GJ)</b>	<b>3 061 891</b>	<b>3 057 749</b>	<b>3 424 852</b>	<b>3 358 724</b>	<b>3 295 706</b>	<b>-1.88%</b>
<b>Stationary Energy Totals</b>						
<b>Total (GJ)</b>	<b>7 011 132</b>	<b>7 054 034</b>	<b>7 662 029</b>	<b>7 722 464</b>	<b>7 678 374</b>	<b>-0.57%</b>
<b>Total emissions (tonnes CO<sub>2</sub>-e)</b>	<b>1 719 563</b>	<b>1 718 254</b>	<b>1 810 205</b>	<b>1 843 525</b>	<b>1 823 226</b>	<b>-1.10%</b>

	2003–04	2004–05	2005–06	2006–07	2007–08	Change from 2006–07
<b>Transport Energy</b>						
<i>Passenger Vehicles</i>						
Automotive diesel (L)	593 230	975 252	1 423 657	2 019 317	1 518 848	–24.78%
Automotive gasoline (petrol) (L)	21 939 189	19 810 135	18 583 578	16 312 631	16 424 533	0.69%
E–10 (Biofuel) (L)				757 287	978 367	29.19%
LPG (L)	178 970	227 980	365 353	603 745	883 930	46.41%
<b>Total (GJ)</b>	<b>777 818</b>	<b>721 010</b>	<b>699 901</b>	<b>676 269</b>	<b>620 197</b>	<b>–8.29%</b>
Distance Travelled (km)	227 276 419	184 241 473	183 886 816	176 323 685	168 353 245	–4.52%
<b>MJ/km/annum</b>	<b>3.42</b>	<b>3.91</b>	<b>3.81</b>	<b>3.84</b>	<b>3.68</b>	<b>–3.95%</b>
<i>Other Transport</i>						
Automotive diesel (L)	4 579 493	4 397 104	4 476 022	10 194 264	9 131 553	–10.42%
Automotive gasoline (petrol) (L)	396 518	595 924	281 601	317 786	224 111	–29.48%
Aviation gasoline (AVGAS) (L)	30 615	14 546	10 397	20 704	9 507 064	45 818.97%
Aviation turbine fuel (L)	514 000	417 180	505 812	506 997	436 714	–13.86%
Gas oil (tonnes)	4 573	4 782	4 477	3 173	4 308	35.77%
LPG (L)		2 773	4 991	5 258	8 665	64.79%
LPG (kg)	4 878	3 645	3 612	3 807	4 466	17.31%
<b>Total (GJ)</b>	<b>414 904</b>	<b>419 940</b>	<b>401 765</b>	<b>565 861</b>	<b>887 783</b>	<b>56.89%</b>
<b>Transport Energy Totals</b>						
<b>Total (GJ)</b>	<b>1 192 722</b>	<b>1 140 950</b>	<b>1 101 666</b>	<b>1 242 129</b>	<b>1 507 980</b>	<b>21.40%</b>
<b>Total emissions (tonnes CO<sub>2</sub>–e)</b>	<b>88 030</b>	<b>84 181</b>	<b>81 406</b>	<b>93 058</b>	<b>110 729</b>	<b>18.99%</b>
<b>Defence Operational Fuel Use in Australia</b>						
Automotive diesel (L)	133 200 505	131 369 217	124 433 419	125 901 375	109 456 541	–13.06%
Automotive gasoline (petrol) (L)	3 426 661	4 186 363	2 135 930	2 000 851	1 205 200	–39.77%
Aviation gasoline (AVGAS) (L)	2 316 914	1 716 973	2 422 443	2 600 000	2 062 000	–20.69%
Aviation turbine fuel (L)	203 439 442	211 053 240	201 751 234	190 906 000	201 537 000	5.57%
Electricity (kWh)	126 969					
<b>Total (GJ)</b>	<b>12 822 450</b>	<b>13 037 616</b>	<b>12 380 807</b>	<b>12 039 623</b>	<b>11 751 054</b>	<b>–2.40%</b>
<b>Australian Government Energy Totals</b>						
<b>Total (GJ)</b>	<b>21 026 304</b>	<b>21 232 601</b>	<b>21 144 502</b>	<b>21 004 216</b>	<b>20 937 408</b>	<b>–0.32%</b>
<b>Total emissions (tonnes CO<sub>2</sub>–e)</b>	<b>2 800 868</b>	<b>2 812 224</b>	<b>2 850 717</b>	<b>2 869 254</b>	<b>2 829 616</b>	<b>–1.38%</b>

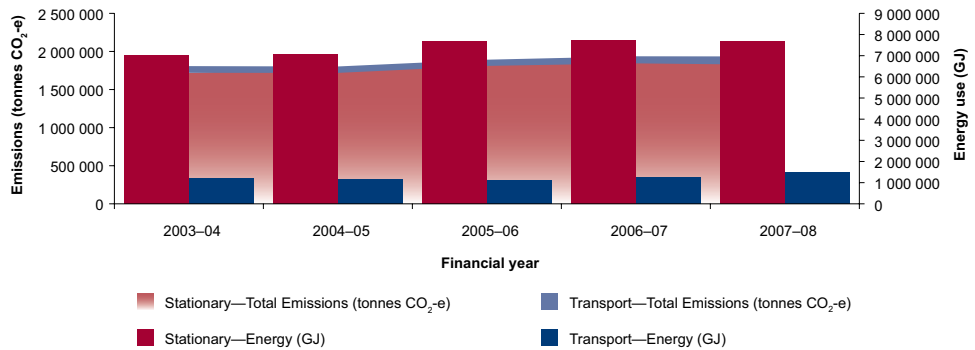
**Figure A.1** Aggregate data for the Australian Government's energy use and intensity in Office—Tenant Light and Power



**Figure A.2** Aggregate data for the Australian Government's energy use and intensity in Office—Central Services



**Figure A.3** Aggregate data for the Australian Government: energy use and greenhouse emissions by sector



## Annex B

### Australian Government Agency Ranking Tables

#### Annex B.1

##### 2007–08 Office—Tenant Light and Power (TLP)

This table presents the performance of each agency that reported Office—Tenant Light and Power. Performance is arranged in ascending order of the key energy performance indicator (MJ/person/annum).

Agencies which appear in the **green** section have already achieved the *Energy Efficiency in Government Operations* (EEGO) Policy target of 7 500 MJ/person/annum. Agencies in the **yellow** section of the table have achieved the previous policy target of 10 000 MJ/person/annum, which was to be met by 2003. The **red** section indicates agencies which have not yet achieved the previous target.

Small agencies with less than 100 staff sometimes have limited opportunities to average their performance across their property portfolio and so their energy intensity performance can be volatile.

Agency comments on their performance are provided in the online database.

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	People	MJ/ person	2006–07 to 2007–08 % change	1999–2000 to 2007–08 % change
Department of Climate Change	434	5 189	84	156	2 791	N/A	N/A
Director of National Parks	703	809	869	199	3 534	–11.14	–49.19
National Capital Authority	248	1 014	244	70	3 553	9.79	–56.30
Land & Water Australia	269	1 247	216	57	4 717	–47.05	–69.52
Department of Resources, Energy and Tourism	964	2 633	366	202	4 782	N/A	N/A
Australian Agency for International Development	3 554	12 402	287	718	4 949	–38.28	–58.45
National Health and Medical Research Council	480	1 456	329	94	5 102	N/A	N/A
Workplace Authority	4 501	20 861	216	824	5 462	N/A	N/A
Great Barrier Reef Marine Park Authority	1 140	3 651	312	200	5 699	–9.47	–24.66
Australian Research Council	668	2 713	246	117	5 717	N/A	N/A
Therapeutic Goods Administration	3 252	13 039	249	561	5 796	–20.02	–59.50

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	People	MJ/ person	2006–07 to 2007–08 % change	1999–2000 to 2007–08 % change
Department of Innovation, Industry, Science and Research	9 608	28 722	335	1 650	5 823	–35.73	–20.10
Australian National Audit Office	2 000	5 533	361	331	6 049	0.26	–43.67
CrimTrac Agency	1 229	2 769	444	202	6 082	N/A	N/A
Australian Public Service Commission	1 243	6 224	200	202	6 154	–10.33	–47.06
Centrelink	169 782	521 711	325	27 569	6 158	–16.60	–49.49
Department of the Environment, Water, Heritage and the Arts	8 964	31 492	285	1 446	6 198	24.43	–18.31
National Museum of Australia	627	1 547	405	100	6 270	21.80	–41.88
Australian Trade Commission	3 142	8 019	392	498	6 310	–3.38	–29.12
Office of the Commonwealth Ombudsman	1 071	3 105	345	166	6 453	–8.77	–15.47
Australian Taxation Office	170 104	443 232	384	26 314	6 464	–4.39	–32.46
Department of Health and Ageing	29 328	81 428	360	4 521	6 487	–1.86	–45.46
Medicare Australia	38 860	101 240	384	5 914	6 571	2.45	25.99
Australian Federal Police	49 569	193 237	257	7 215	6 870	–32.33	–54.99
National Native Title Tribunal	1 745	5 767	303	250	6 980	–0.81	–32.07
Food Standards Australia New Zealand	890	2 408	369	125	7 117	4.19	–21.29
Child Support Agency	28 529	59 077	483	3 985	7 159	13.88	N/A
National Library of Australia	3 278	12 370	265	455	7 204	–2.22	14.85
Department of Human Services	1 838	4 983	369	252	7 279	–8.26	N/A
Department of Immigration and Citizenship	58 657	132 236	444	7 866	7 457	–0.30	–38.71
IP Australia	7 190	19 386	371	960	7 493	–37.97	–13.36%
Australian Institute of Marine Science	293	586	500	39	7 519	N/A	N/A
Department of Agriculture, Fisheries and Forestry	30 394	76 067	400	3 963	7 670	20.44	–27.85
Australian Institute of Family Studies	502	1 535	327	65	7 725	–20.12	–38.46
Australian Institute of Criminology	443	1 729	256	56	7 973	–23.81	–48.75
Migration Review Tribunal- Refugee Review Tribunal	2 980	7 500	397	371	8 034	–6.30	–8.66
ARPANSA	297	1 110	268	37	8 039	–18.45	4.99

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	People	MJ/ person	2006–07 to 2007–08 % change	1999–2000 to 2007–08 % change
Australian Fisheries Management Authority	2 395	5 304	452	292	8 203	25.57	–30.21
Department of Infrastructure, Transport, Regional Development and Local Government	13 857	34 100	406	1 679	8 255	–2.08	–43.02
Department of Defence	150 786	365 891	412	18 033	8 362	–9.28	–45.88
Torres Strait Regional Authority	346	933	371	41	8 450	N/A	N/A
Office of Parliamentary Counsel	444	1 953	227	52	8 531	–17.69	–27.82
Department of Veterans' Affairs	19 911	65 047	306	2 332	8 538	6.43	5.19
Private Health Insurance Ombudsman	85	217	393	10	8 539	8.43	12.77
Superannuation Complaints Tribunal	308	962	321	36	8 590	6.87	4.91
Australian Institute of Health & Welfare	1 862	4 132	451	216	8 622	–12.78	2.68
Australian Prudential Regulation Authority	5 396	11 744	459	622	8 675	–1.36	–25.57
Equal Opportunity for Women in the Workplace Agency	165	464	357	19	8 705	10.42	2.60
Bureau of Meteorology	10 159	26 718	380	1 159	8 765	8.89	–28.38
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	5 563	12 775	435	633	8 788	4.82	–41.70
Geoscience Australia	7 500	30 728	244	850	8 823	17.73	–57.89
Australian Competition and Consumer Commission	6 448	15 005	430	722	8 931	–3.99	–8.35
Civil Aviation Safety Authority	6 887	23 857	289	767	8 975	–11.25	–21.24
Family Court of Australia	1 028	1 989	517	112	9 176	9.83	–49.89
Australian Pesticides and Veterinary Medicines Authority	1 467	2 951	497	158	9 282	N/A	N/A
Office of the Workplace Ombudsman	3 938	18 054	218	421	9 353	N/A	N/A
Office of the Inspector-General of Taxation	95	320	296	10	9 482	N/A	N/A
Insolvency and Trustee Service, Australia	3 270	7 682	426	343	9 533	4.03	N/A
ComSuper	6 425	11 911	539	660	9 736	24.99	26.52
Australian Securities and Investments Commission	17 283	41 752	414	1 775	9 737	–12.83	–31.84

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	People	MJ/ person	2006–07 to 2007–08 % change	1999–2000 to 2007–08 % change
Comcare Australia	4 323	8 615	502	444	9 737	–41.04	–9.31
Department of the Treasury	8 855	19 811	447	909	9 738	30.16	–7.25
National Archives of Australia	5 295	14 052	377	540	9 806	4.23	–31.92
Department of the Prime Minister and Cabinet	7 290	18 995	384	743	9 808	–16.89	–36.35
Australian Bureau of Statistics	26 760	67 532	396	2 683	9 972	–0.67	–11.18
Commonwealth Grants Commission	529	1 062	498	53	9 984	–6.79	–19.13
Department of Broadband, Communications and the Digital Economy	7 221	14 502	498	715	10 098	22.52	22.76
Australian Customs Service	52 369	99 487	526	5 168	10 134	14.36	–16.82
Australian Communications and Media Authority	6 355	16 517	385	622	10 217	1.64	–32.32
Australian Government Solicitor	8 331	17 561	474	812	10 260	–8.22	–18.05
Cancer Australia	236	493	479	23	10 491	N/A	N/A
Productivity Commission	2 154	6 131	351	199	10 823	1.02	–14.31
National Water Commission	534	1 151	464	49	10 889	–7.43	N/A
Department of Education, Employment and Workplace Relations	66 835	126 560	528	6 125	10 912	–6.93	–6.75
National Blood Authority	572	909	629	52	11 002	N/A	N/A
Christmas Island Administration	265	1 170	226	24	11 038	21.46	74.68
Social Security Appeals Tribunal	1 707	6 905	247	154	11 083	3.66	N/A
Commonwealth Director of Public Prosecutions	6 730	21 452	314	599	11 235	–0.62	–11.53
Tourism Australia	1 413	2 391	591	124	11 366	0.04	7.47
Office of the Privacy Commissioner	707	1 352	523	62	11 398	–6.68	N/A
Professional Services Review Scheme	290	595	488	25	11 615	–19.23	30.97
CRS Australia	20 299	41 932	484	1 705	11 905	2.54	–6.30
National Competition Council	156	458	340	13	11 986	–10.92	–17.42
Department of Foreign Affairs and Trade	28 106	53 719	523	2 330	12 063	18.98	–40.00
Film Finance Corporation Australia Ltd	529	1 250	424	43	12 312	4.12	–2.13
Takeovers Panel	74	318	233	6	12 342	–13.32	115.89
Australian Fair Pay Commission Secretariat	469	1 851	253	38	12 344	N/A	N/A

Energy use in the Australian Government's Operations 2007–08

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	People	MJ/ person	2006–07 to 2007–08 % change	1999–2000 to 2007–08 % change
Rural Industries Research and Development Corporation	341	660	517	27	12 639	0.29	69.20
Australian Crime Commission	9 528	23 800	400	744	12 807	47.61	–9.06
Department of Families, Housing, Community Services and Indigenous Affairs	42 575	75 015	568	3 324	12 808	–17.31	60.74
Australian Film Commission	1 636	3 458	473	126	12 982	1.85	3.21
Australian Transaction Reports and Analysis Centre	5 204	7 027	741	398	13 077	10.54	–33.31
Human Rights & Equal Opportunity Commission	1 518	3 217	472	116	13 085	–9.06	3.47
Australian Law Reform Commission	301	759	397	23	13 398	–1.59	–15.40
Australian Sports Anti-Doping Authority	852	1 246	684	63	13 522	0.54	–0.56
Office of the Australian Building and Construction Commissioner	1 978	6 362	311	144	13 733	N/A	N/A
Department of Finance and Deregulation	46 237	84 976	544	3 264	14 166	42.84	28.27
Corporations and Markets Advisory Committee	51	224	229	4	14 616	N/A	N/A
Wheat Exports Authority	242	277	872	16	15 103	N/A	N/A
Attorney-General's Department	22 382	33 255	673	1 423	15 735	14.78	28.43
Jervis Bay Territory Administration	48	107	449	3	16 007	26.69	36.80
Australian Centre for International Agricultural Research	732	1 718	426	44	16 635	–2.34	51.41
Australian Security Intelligence Organisation (ASIO)	33 327	34 526	965	1 492	22 337	–4.23	N/A
Office of National Assessments	3 541	3 079	1 150	147	24 089	–3.50	106.74
Australian Commission for Law Enforcement Integrity	365	438	834	11	34 475	N/A	N/A
<b>Australian Government Total</b>	<b>1 333 661</b>	<b>3 330 888</b>	<b>400</b>	<b>164 384</b>	<b>8 113</b>	<b>–5.60</b>	<b>–30.95</b>

## Annex B.2

### 2007–08 Office—Central Services (CS)

This table presents the performance of each agency that reported under the Office—Central Services end use category. The performance is arranged in ascending order of the key energy performance indicator (MJ/m<sup>2</sup>/annum).

Agencies which appear in the **green** section have already achieved the *Energy Efficiency in Government Operations* (EEGO) Policy target of 400 MJ/m<sup>2</sup>/annum. Agencies in the **yellow** section of the table have achieved the previous policy target of 500 MJ/m<sup>2</sup>/annum, which was to be met by 2003. The **red** section indicates agencies which have not yet achieved the previous target.

Agency comments on their performance are provided in the online database.

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	2006–07 to 2007–08 % change	1999–2000 to 2007–08 % change
Australian Centre for International Agricultural Research	68	1 718	39	-9.58	-87.68
Australian Communications and Media Authority	91	1 060	86	7.31	N/A
Medicare Australia	14 199	101 240	140	-2.87	-13.65
Land & Water Australia	231	1 247	185	-6.99	N/A
National Library of Australia	7 448	40 000	186	-2.03	81.68
Christmas Island Administration	265	1 170	226	21.46	-48.05
National Capital Authority	249	1 014	245	74.74	N/A
Australian Institute of Family Studies	392	1 535	255	-64.42	-42.84
Australian Institute of Criminology	443	1 729	256	-20.07	-26.93
ARPANSA	297	1 110	268	-72.60	112.84
Director of National Parks	116	374	309	2.38	-29.20
Great Barrier Reef Marine Park Authority	1 140	3 651	312	-1.17	82.46
Department of the Prime Minister and Cabinet	5 016	15 307	328	16.07	N/A
Torres Strait Regional Authority	346	933	371	N/A	N/A
Australian Federal Police	67 731	173 322	391	-18.18	-35.00
Private Health Insurance Ombudsman	85	217	393	8.43	N/A
Australian Customs Service	7 228	17 975	402	-36.72	41.06
National Museum of Australia	627	1 547	405	21.80	N/A
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	5 232	12 775	410	-14.30	-21.18

<i>Agency</i>	<i>2007–08 Energy Use (GJ)</i>	<i>Area (m<sup>2</sup>)</i>	<i>MJ/m<sup>2</sup></i>	<i>2006–07 to 2007–08 % change</i>	<i>1999–2000 to 2007–08 % change</i>
Bureau of Meteorology	4 354	10 579	<b>412</b>	2.41	–41.49
Centrelink	133 828	303 521	<b>441</b>	3.86	–34.90
National Water Commission	534	1 151	<b>464</b>	–9.28	N/A
National Archives of Australia	6 149	13 105	<b>469</b>	–4.77	–29.74
Department of Foreign Affairs and Trade	22 838	47 734	<b>478</b>	–13.76	6.16
Department of Families, Housing, Community Services and Indigenous Affairs	5 906	12 016	<b>492</b>	2.57	N/A
Commonwealth Grants Commission	529	1 062	<b>498</b>	6.69	122.74
Australian Taxation Office	70 986	135 056	<b>526</b>	–13.97	35.13
Department of Defence	142 710	264 429	<b>540</b>	–0.90	–6.71
Department of Immigration and Citizenship	2 490	4 506	<b>553</b>	175.82	N/A
Property Group	61 243	106 597	<b>575</b>	–6.95	78.48
Geoscience Australia	18 015	30 728	<b>586</b>	–6.98	–42.50
Australian National Audit Office	3 219	5 263	<b>612</b>	–22.67	31.09
Child Support Agency	19 319	30 677	<b>630</b>	63.72	N/A
Office of National Assessments	1 976	3 079	<b>642</b>	2.82	N/A
Australian Securities and Investments Commission	5 536	8 386	<b>660</b>	–9.16	N/A
Australian Security Intelligence Organisation (ASIO)	15 449	23 277	<b>664</b>	17.38	N/A
Civil Aviation Safety Authority	440	650	<b>677</b>	2.72	–4.06
Department of Agriculture, Fisheries and Forestry	3 763	4 267	<b>882</b>	–35.35	N/A
Therapeutic Goods Administration	11 810	12 293	<b>961</b>	–4.72	N/A
Department of Finance and Deregulation	1 698	946	<b>1 795</b>	N/A	N/A
<b>Australian Government Total</b>	<b>643 997</b>	<b>1 397 246</b>	<b>461</b>	<b>–4.16</b>	<b>–1.99</b>

## Annex B.3

### 2007–08 Laboratories

This table presents the performance of each agency that reported under the Laboratories category. The performance is arranged in ascending order of the key energy performance indicator (MJ/m<sup>2</sup>/annum).

To date there are no targets set for Laboratory performance. Agencies which appear in **green** represent those performing below an intensity of 1 000 MJ/m<sup>2</sup>/annum. Agencies in the **yellow** part of the table are performing between 1 000 MJ/m<sup>2</sup>/annum to 1 200 MJ/m<sup>2</sup>/annum. The **red** section indicates the agencies operating above 1 200 MJ/m<sup>2</sup>/annum.

Agency comments on their performance are provided in the online database.

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	2006–07 to 2007–08 % change	1999–2000 to 2007–08 % change
Director of National Parks	19	60	<b>318</b>	N/A	N/A
Australian Institute of Marine Science	8 319	13 050	<b>637</b>	-1.86	13.88
Geoscience Australia	1 885	1 952	<b>966</b>	-0.86	N/A
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	641 916	584 895	<b>1 097</b>	1.62	13.24
Department of Agriculture, Fisheries and Forestry	7 587	6 543	<b>1 160</b>	8.23	70.21
Department of Defence	180 991	151 917	<b>1 191</b>	28.63	-1.20
ARPANSA	10 059	8 111	<b>1 240</b>	-3.69	-18.35
Department of the Environment, Water, Heritage and the Arts	1 590	1 147	<b>1 386</b>	-31.97	N/A
Therapeutic Goods Administration	18 460	6 949	<b>2 656</b>	-4.84	40.18
Department of Innovation, Industry, Science and Research	50 558	17 181	<b>2 943</b>	-3.09	24.92
<b>Australian Government Total</b>	<b>921 382</b>	<b>791 805</b>	<b>1 164</b>	<b>6.23</b>	<b>10.24</b>

## Annex B.4

### 2007–08 Public Buildings

This table presents the performance of each agency that reported under the Public Buildings category. The performance is arranged in ascending order of the key energy performance indicator (MJ/m<sup>2</sup>/annum).

To date there are no targets set for Public Buildings performance. The agencies which appear in **green** represent those performing in the best performing third of these agencies. Agencies in the **yellow** part of the table are in the middle third. The **red** section indicates the agencies in the most energy intensive third of all agencies in this category.

Agency comments on their performance are provided in the online database.

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	% Change 2006–07 to 2007–08	% Change 1999–2000 to 2007–08
Christmas Island Administration	45	500	<b>90</b>	112.27	-57.22
National Library of Australia	4,128	6,490	<b>636</b>	-2.08	-1.29
National Science and Technology Centre (Questacon)	6,710	10,500	<b>639</b>	-13.76	-8.72
Director of National Parks	1,246	1,946	<b>640</b>	-9.66	-6.46
High Court of Australia	12,148	18,500	<b>657</b>	-1.36	-9.07
Department of Parliamentary Services	130,049	152,000	<b>856</b>	-7.01	-19.93
Department of the Environment, Water, Heritage and the Arts	24,593	25,041	<b>982</b>	-6.96	n/a
National Maritime Museum of Australia	16,614	13,687	<b>1,214</b>	-5.38	22.77
Australian War Memorial	24,454	19,451	<b>1,257</b>	1.58	-2.19
National Archives of Australia	1,209	900	<b>1,343</b>	-0.95	n/a
Australian Film Commission	11,655	7,876	<b>1,480</b>	-5.23	28.12
National Gallery of Australia	54,458	35,367	<b>1,540</b>	0.78	-50.56
Great Barrier Reef Marine Park Authority	7,598	4,645	<b>1,636</b>	-0.73	19.99
National Museum of Australia	39,145	16,459	<b>2,378</b>	-7.92	n/a
National Capital Authority	2,758	1,061	<b>2,599</b>	-0.43	578.04
<b>Australian Government Total</b>	<b>344 075</b>	<b>314 423</b>	<b>1 094</b>	<b>-4.57</b>	<b>-5.74</b>

## Annex B.5

### 2007–08 Computer Centres

This table presents the performance of each agency that reported under the Computer Centres category. The performance is arranged in ascending order of the key energy performance indicator (MJ/m<sup>2</sup>/annum).

To date there are no targets set for Computer Centre performance. The agencies which appear in **green** represent those performing below an intensity of 7 000 MJ/m<sup>2</sup>/annum. Agencies in the **yellow** part of the table are performing between 7 000 MJ/m<sup>2</sup>/annum to 17 000 MJ/m<sup>2</sup>/annum. The **red** section indicates agencies operating above 17 000 MJ/m<sup>2</sup>/annum.

Agency comments on their performance are provided in the online database.

Agency	2007–08 Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	2006–07 to 2007–08 % change
Department of Finance and Deregulation	928	2 398	387	N/A
Attorney-General's Department	1 211	647	1 872	N/A
Child Support Agency	285	50	5 699	N/A
Australian Taxation Office	64 160	9 921	6 467	N/A
IP Australia	3 398	520	6 535	N/A
Department of Veterans' Affairs	1 365	200	6 824	-45.09
Australian Agency for International Development	979	113	8 664	N/A
Department of Infrastructure, Transport, Regional Development and Local Government	2 185	181	12 068	-4.64
Department of the Prime Minister and Cabinet	1 196	91	13 139	-4.25
Centrelink	30 862	2 295	13 447	18.67
Land & Water Australia	189	12	15 744	N/A
Department of Innovation, Industry, Science and Research	4 072	252	16 158	N/A
Department of Resources, Energy and Tourism	584	36	16 216	N/A
Geoscience Australia	3 463	200	17 317	-7.76
Family Court of Australia	1 357	70	19 392	-33.74
Civil Aviation Safety Authority	1 707	82	20 755	34.70
Australian Public Service Commission	648	31	21 197	N/A
Australian Trade Commission	4 677	195	23 985	49.11
Department of Immigration and Citizenship	9 896	326	30 356	7.26
Department of Defence	66 794	1 307	51 105	N/A
<b>Australian Government Total</b>	<b>199 957</b>	<b>18 927</b>	<b>10 565</b>	<b>-73.08</b>

## Annex B.6

### 2007–08 Law Courts

This table presents the performance of each agency that reported under the Law Courts category. The performance is arranged in ascending order of the key energy performance indicator (MJ/m<sup>2</sup>/annum).

To date there are no targets set for Law Courts performance. The agencies which appear in **green** represent those in the best performing third of these agencies. Agency performance in the **yellow** part of the table is similar to the Australian Government average. The **red** section indicates the agencies in the most energy intensive third of all agencies that reported in this category.

Agency comments on their performance are provided in the online database.

<i>Agency</i>	<i>2007–08 Energy Use (GJ)</i>	<i>Area (m<sup>2</sup>)</i>	<i>MJ/m<sup>2</sup></i>	<i>2006–07 to 2007–08 % change</i>	<i>1999–2000 to 2007–08 % change</i>
Australian Industrial Registry	5,316	21,678	245	0.01	9.43
Administrative Appeals Tribunal	2,919	10,964	266	0.31	-4.91
Family Court of Australia	5,983	12,662	473	-7.12	17.77
Commonwealth Law Courts	79,865	117,045	682	-3.08	-6.64
Law Courts Limited	13,951	15,595	895	-1.20	-2.62
<b>Australian Government Total</b>	<b>108 034</b>	<b>177 944</b>	<b>607</b>	<b>-2.75</b>	<b>-0.09</b>

## Annex B.7

### 2007–08 Climate Controlled Stores

This table presents the performance of each agency that reported under the Climate Controlled Stores category. The performance is arranged in ascending order of the key energy performance indicator (MJ/m<sup>2</sup>/annum).

To date there are no targets set for Climate Controlled Stores performance. The agencies which appear in **green** represent those in the best performing third of these agencies. Agencies in the **yellow** part of the table are close to the Australian Government average. The **red** section indicates agencies operating in the most energy intensive third of all agencies that reported in this category.

Agency comments on their performance are provided in the online database.

Agency	Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	2006–07 to 1999–2000	
				2007–08 % change	to 2007–08 % change
National Gallery of Australia	1 819	5 067	359	–10.21	18.16
National Library of Australia	3 276	8 480	386	–34.36	–45.09
National Archives of Australia	19 652	31 845	617	–6.19	4.01
Australian War Memorial	9,963	13 743	725	–3.59	–19.69
Australian Institute of Marine Science	509	630	809	1.10	68.47
National Maritime Museum of Australia	1,175	1 415	831	–26.02	n/a
National Museum of Australia	3,470	3 015	1 151	–7.71	8.52
Australian Film Commission	4 832	3 384	1 428	15.42	–5.37
Director of National Parks	2 819	892	3 160	4.90	–8.16
<b>Australian Government Total</b>	<b>47 516</b>	<b>68 471</b>	<b>694</b>	<b>–6.10</b>	<b>–0.64</b>

## Annex B.8

### 2007–08 Other Buildings

This table presents the performance of each agency that reported under the Other Buildings category. The performance is arranged in ascending order of the key energy performance indicator (MJ/m<sup>2</sup>/annum).

To date there are no targets set for the Other Buildings end use category. The agencies which appear in **green** represent those in the best performing third of these agencies. Agencies in the **yellow** part of the table are close to the Australian Government average. The **red** section indicates agencies operating in the most energy intensive third of all agencies that reported in this category.

Agency comments on their performance are provided in the online database.

Agency	Energy Use (GJ)	Area (m <sup>2</sup> )	MJ/m <sup>2</sup>	2006–07 to 2007–08 % change	1999–2000 to 2007–2008 % change
Department of Education, Employment and Workplace Relations	5	400	13	N/A	-99.68
Department of Innovation, Industry, Science and Research	37	890	41	-18.66	-86.29
Department of Broadband, Communications and the Digital Economy	28	563	51	N/A	-93.53
Australian Taxation Office	115	1 980	58	-98.80	-96.78
Department of Agriculture, Fisheries and Forestry	13 148	212 467	62	10.62	-68.23
Department of Infrastructure, Transport, Regional Development and Local Government	96	1 306	73	31.83	-26.33
National Museum of Australia	848	10 845	78	4.40	-13.78
Australian Customs Service	10 496	132 570	79	-23.23	-67.18
National Archives of Australia	1 301	12 450	105	-2.82	-16.65
Medicare Australia	329	2 029	162	24.22	-95.54
IP Australia	630	3 669	172	-52.40	-10.34
Australian Film Commission	232	1 350	172	21.47	61.83
Comcare Australia	274	1 500	182	-7.83	-31.42
Centrelink	6 128	27 212	225	-8.29	N/A
Department of Families, Housing, Community Services and Indigenous Affairs	2 445	10 689	229	N/A	N/A
Great Barrier Reef Marine Park Authority	168	716	235	N/A	N/A
Torres Strait Regional Authority	289	1 173	246	N/A	N/A
Australian Electoral Commission	9 427	33 254	283	-9.69	5.06

<i>Agency</i>	<i>Energy Use (GJ)</i>	<i>Area (m<sup>2</sup>)</i>	<i>MJ/m<sup>2</sup></i>	<i>2006–07 to 2007–08 % change</i>	<i>1999–2000 to 2007–2008 % change</i>
National Science and Technology Centre (Questacon)	907	3 000	<b>302</b>	–22.71	N/A
Geoscience Australia	5 231	13 680	<b>382</b>	–5.97	–47.78
Australian Bureau of Statistics	7 802	19 669	<b>397</b>	–41.29	N/A
Australian Communications and Media Authority	373	794	<b>470</b>	1.68	145.13
CRS Australia	1 338	2 365	<b>566</b>	5.68	17.09
Department of the Environment, Water, Heritage and the Arts	16 751	29 496	<b>568</b>	–6.32	17.83
Department of Health and Ageing	605	1 050	<b>576</b>	5.31	908.27
Australian Hearing	14 596	24 042	<b>607</b>	–2.18	N/A
Attorney-General's Department	3 843	5 713	<b>673</b>	–0.20	N/A
Office of the Official Secretary to the Governor-General	6 602	9 476	<b>697</b>	6.32	–15.46
Australian Film, Television and Radio School	8 149	11 632	<b>701</b>	–7.31	–9.14
Royal Australian Mint	12 149	15 620	<b>778</b>	–18.40	–25.54
National Library of Australia	9 951	12 573	<b>791</b>	54.56	14.68
Special Broadcasting Service	27 073	32 946	<b>822</b>	–2.56	25.97
Christmas Island Administration	4 219	4 985	<b>846</b>	–0.56	27.07
Australian Broadcasting Corporation	174 330	203 081	<b>858</b>	0.89	–19.70
Department of Immigration and Citizenship	18 960	19 783	<b>958</b>	40.05	N/A
Department of the Prime Minister and Cabinet	1 599	1 590	<b>1 006</b>	14.71	176.16
Australian Nuclear Science & Technology Organisation	121 190	109 850	<b>1 103</b>	–17.37	–7.18
Australian War Memorial	9 641	7 556	<b>1 276</b>	11.12	–24.40
Australian Sports Commission	86 780	63 500	<b>1 367</b>	–10.91	N/A
Director of National Parks	35 892	21 259	<b>1 688</b>	–11.98	–15.81
Bureau of Meteorology	34 167	16 948	<b>2 016</b>	0.90	68.40
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	15 762	7 262	<b>2 170</b>	4.89	85.88
Australian Institute of Marine Science	17 991	7 200	<b>2 499</b>	1.10	64.15
Department of Foreign Affairs and Trade	6 922	1 808	<b>3 829</b>	–7.93	N/A
<b>Australian Government Total</b>	<b>688 817</b>	<b>1 101 941</b>	<b>625</b>	<b>16.86</b>	<b>–33.26</b>

## Annex B.9

### 2007–08 Passenger Vehicles

This table presents the performance of each agency that reported under the Passenger Vehicles category. The performance is arranged in ascending order of the key energy performance indicator (MJ/km/annum).

To date there are no targets set for Passenger Vehicles performance. The agencies which appear in **green** represent those performing below three MJ/km. Agencies in the **yellow** part of the table are close to the Australian Government average. The **red** section indicates agencies with an energy intensity of four or more MJ/km.

Agency comments on their performance are provided in the online database.

Agency	Energy Use (GJ)	Distance travelled (km)	MJ/km	2006–07 to 2007–08 % change	1999–2000 to 2007–08 % change
Jervis Bay Territory Administration	25	15 151	1.64	-40.91	-31.23
Professional Services Review Scheme	10	5 880	1.74	-54.61	-41.82
Australian Sports Anti-Doping Authority	175	94 119	1.86	-33.54	-48.26
Office of the Official Secretary to the Governor-General	249	130 000	1.92	-49.44	-53.43
Department of Veterans' Affairs	1 766	884 308	2.00	-20.20	-31.72
Department of Innovation, Industry, Science and Research	3 913	1 887 827	2.07	-41.51	-13.69
Department of Education, Employment and Workplace Relations	8 363	3 489 310	2.40	-38.72	-19.07
Film Finance Corporation Australia Ltd	19	7 413	2.50	5.79	-57.89
Australian Bureau of Statistics	3 431	1 337 381	2.57	-39.49	-6.05
Australian Hearing	4 620	1 701 053	2.72	-10.79	-10.14
Australian Film, Television and Radio School	436	157 938	2.76	-32.67	-16.14
Attorney-General's Department	2 624	942 321	2.78	-29.40	-20.34
Department of Health and Ageing	3 540	1 221 497	2.90	-1.96	-9.35
Department of Infrastructure, Transport, Regional Development and Local Government	3 418	1 170 716	2.92	-23.16	-7.99
Office of the Workplace Ombudsman	1 617	547 913	2.95	N/A	N/A
Comcare Australia	578	194 928	2.96	-4.70	-13.25
Commonwealth Scientific and Industrial Research Organisation (CSIRO)	27 239	9 068 240	3.00	-20.60	-29.72
Great Barrier Reef Marine Park Authority	1 045	332 368	3.14	-5.48	20.00
Australian Institute of Marine Science	4 176	1 315 333	3.17	-8.52	-8.50

<i>Agency</i>	<i>Energy Use (GJ)</i>	<i>Distance travelled (km)</i>	<i>MJ/km</i>	<i>2006–07 to 2007–08 % change</i>	<i>1999–2000 to 2007–08 % change</i>
National Water Commission	16	5 176	<b>3.18</b>	–22.28	
Medicare Australia	8 694	2 688 605	<b>3.23</b>	–22.02	–43.01
Australian Public Service Commission	424	129 456	<b>3.28</b>	–4.23	4.30
Australian Trade Commission	1 303	397 114	<b>3.28</b>	0.78	–10.11
Child Support Agency	1 426	432 228	<b>3.30</b>	17.63	
National Science and Technology Centre (Questacon)	447	135 041	<b>3.31</b>	–14.08	–0.31
Australian Nuclear Science & Technology Organisation	4 193	1 266 697	<b>3.31</b>	–12.16	–23.31
Commonwealth Grants Commission	92	27 595	<b>3.33</b>	–11.77	–1.66
Australian Taxation Office	29 925	8 940 443	<b>3.35</b>	–6.40	14.02
Office of Parliamentary Counsel	432	128 095	<b>3.38</b>	–8.09	–13.21
Civil Aviation Safety Authority	1 484	435 392	<b>3.41</b>	7.92	–3.51
Australian Security Intelligence Organisation (ASIO)	22 218	6 496 936	<b>3.42</b>	–13.08	N/A
Workplace Authority	189	55 308	<b>3.42</b>	N/A	N/A
Commonwealth Director of Public Prosecutions	829	240 004	<b>3.45</b>	–2.67	–11.53
National Blood Authority	257	74 182	<b>3.46</b>	N/A	N/A
National Gallery of Australia	469	134 979	<b>3.47</b>	1.79	–16.56
Australian Crime Commission	11 931	3 419 000	<b>3.49</b>	19.48	14.20
National Museum of Australia	578	164 242	<b>3.52</b>	23.59	8.14
Office of the Australian Building and Construction Commissioner	1 779	504 817	<b>3.52</b>	N/A	N/A
Australian Transaction Reports and Analysis Centre	218	61 640	<b>3.53</b>	–6.07	–17.62
CRS Australia	11 717	3 315 570	<b>3.53</b>	–0.06	48.68
Australian Institute of Health & Welfare	97	27 306	<b>3.54</b>	0.53	30.39
Insolvency and Trustee Service, Australia	456	127 580	<b>3.58</b>	–7.78	N/A
Department of Parliamentary Services	2 219	617 096	<b>3.60</b>	–4.97	5.60
Office of National Assessments	896	247 902	<b>3.61</b>	–10.23	–3.95
Australian Government Solicitor	3 016	830 640	<b>3.63</b>	–4.81	2.46
Geoscience Australia	896	245 349	<b>3.65</b>	–4.15	3.29
National Library of Australia	700	190 128	<b>3.68</b>	10.30	–1.91
Department of Defence	130 744	35 476 907	<b>3.69</b>	0.89	18.05
Food Standards Australia New Zealand	218	59 004	<b>3.69</b>	–5.30	22.63
Department of Broadband, Communications and the Digital Economy	2 062	557 930	<b>3.70</b>	–3.11	41.78
Department of Immigration and Citizenship	10 628	2 873 247	<b>3.70</b>	2.82	–1.51

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Australian Institute of Family Studies	59	16 039	<b>3.71</b>	-0.53	62.72
Department of Resources, Energy and Tourism	680	182 814	<b>3.72</b>	N/A	N/A
National Capital Authority	655	175 751	<b>3.73</b>	2.71	-0.70
Department of Agriculture, Fisheries and Forestry	31 486	8 411 095	<b>3.74</b>	-1.84	12.57
Australian Electoral Commission	1 586	423 605	<b>3.74</b>	-3.02	0.10
Office of the Commonwealth Ombudsman	153	40 705	<b>3.75</b>	-7.67	35.11
Australian Broadcasting Corporation	19 825	5 282 266	<b>3.75</b>	-2.29	5.25
Australian Pesticides and Veterinary Medicines Authority	60	15 772	<b>3.79</b>	N/A	N/A
Special Broadcasting Service	2 427	639 890	<b>3.79</b>	3.21	-3.37
Christmas Island Administration	1 391	365 507	<b>3.80</b>	28.90	20.74
Australian Competition and Consumer Commission	1 143	296 838	<b>3.85</b>	-2.78	-1.20
Australian Customs Service	20 050	5 204 845	<b>3.85</b>	-10.33	12.74
Department of Families, Housing, Community Services and Indigenous Affairs	15 236	3 925 863	<b>3.88</b>	-11.33	16.93
Migration Review Tribunal-Refugee Review Tribunal	296	74 874	<b>3.95</b>	-5.54	13.87
ComSuper	507	128 191	<b>3.95</b>	-8.17	35.30
Australian Communications and Media Authority	1 946	490 946	<b>3.96</b>	-8.64	-6.39
Australian Film Commission	33	8 261	<b>3.97</b>	2.08	104.35
High Court of Australia	429	107 653	<b>3.98</b>	-7.71	-6.50
Administrative Appeals Tribunal	1 240	311 300	<b>3.98</b>	-7.27	4.72
Centrelink	55 154	13 832 648	<b>3.99</b>	13.40	38.69
Department of the Prime Minister and Cabinet	2 172	540 467	<b>4.02</b>	-11.97	22.75
Australian Institute of Criminology	82	20 352	<b>4.03</b>	20.56	17.79
Department of Human Services	729	180 106	<b>4.05</b>	5.38	N/A
Australian Sports Commission	4 193	1 035 587	<b>4.05</b>	-15.20	-8.16
Australian Agency for International Development	1 422	349 707	<b>4.07</b>	-0.98	100.52
ARPANSA	448	109 425	<b>4.09</b>	2.45	79.04
Australian War Memorial	760	184 926	<b>4.11</b>	-13.54	35.63
Australian Industrial Registry	3 582	869 854	<b>4.12</b>	-3.95	1.28
Productivity Commission	1 050	252 159	<b>4.16</b>	1.54	3.51
Australian National Audit Office	194	45 933	<b>4.23</b>	7.86	26.40

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Australian Centre for International Agricultural Research	160	37 697	<b>4.23</b>	–0.73	23.05
CrimTrac Agency	182	42 973	<b>4.25</b>	N/A	N/A
Department of Climate Change	256	60 212	<b>4.25</b>	N/A	N/A
Australian Research Council	570	133 691	<b>4.26</b>	N/A	N/A
Department of the Environment, Water, Heritage and the Arts	3 596	839 921	<b>4.28</b>	0.37	49.71
Social Security Appeals Tribunal	258	60 000	<b>4.30</b>	16.17	N/A
National Native Title Tribunal	480	111 530	<b>4.30</b>	–1.90	26.82
Director of National Parks	9 752	2 247 759	<b>4.34</b>	–17.92	–2.09
Bureau of Meteorology	7 225	1 660 355	<b>4.35</b>	5.75	9.73
Department of Finance and Deregulation	38 699	8 761 830	<b>4.42</b>	2.85	–5.72
Australian Federal Police	55 932	12 590 115	<b>4.44</b>	–0.65	30.72
National Archives of Australia	679	152 691	<b>4.45</b>	–15.05	11.78
Family Court of Australia	4 212	943 224	<b>4.47</b>	3.43	23.97
National Maritime Museum of Australia	703	157 100	<b>4.48</b>	–10.48	21.62
Office of the Privacy Commissioner	278	61 815	<b>4.51</b>	–15.44	N/A
Therapeutic Goods Administration	624	138 017	<b>4.52</b>	3.66	26.81
Australian Law Reform Commission	141	30 951	<b>4.54</b>	3.75	4.90
Australian Fisheries Management Authority	226	49 172	<b>4.60</b>	0.21	19.93
Australian Securities and Investments Commission	1 573	338 369	<b>4.65</b>	24.77	58.14
Department of the Treasury	124	26 443	<b>4.69</b>	–3.87	40.89
Department of Foreign Affairs and Trade	6 863	1 411 147	<b>4.86</b>	20.79	38.84
Royal Australian Mint	70	14 200	<b>4.90</b>	N/A	61.30
IP Australia	691	130 349	<b>5.30</b>	0.92	10.59
Torres Strait Regional Authority	91	16 000	<b>5.69</b>	N/A	N/A
National Health and Medical Research Council	31	5 000	<b>6.16</b>	N/A	N/A
<b>Australian Government Total</b>	<b>620 197</b>	<b>168 353 245</b>	<b>3.68</b>	<b>–3.95</b>	<b>10.11</b>