



Parliament House 2006–07 Environmental Performance Report

Table of contents

Introduction	1
Materials	2
EN 1 Total materials use other than water, by type	2
EN 2 Percentage of materials used that are wastes (processed or unprocessed) from sources external to the reporting organisation.	2
Energy	2
EN 3 Direct energy use segmented by primary source	2
EN 4 Indirect energy use	6
Water	6
EN 5 Total water use	6
Biodiversity	8
EN 6 Location and size of land owned, leased, or managed in biodiversity-rich habitats	8
EN 7 Description of the major impacts on biodiversity associated with activities and/or products and services in terrestrial, freshwater, and marine environments	8
Emissions, effluents and waste	8
EN 8 Greenhouse gas emissions	8
EN 9 Use and emissions of ozone depleting substances	9
EN 10 NO _x , SO _x , and other significant air emissions by type	10
EN 11 Total amount of waste by type and destination	11
EN 12 Significant discharges to water by type	13
EN 13 Significant spills of chemicals, oils, and fuels in terms of total number and total volume	14
Products and services	14
EN 14 Significant environmental impacts of principal products and services ..	14
EN 15 Percentage of the weight of products sold that is reclaimable at the end of the products' useful life and percentage that is actually reclaimed	14
Compliance	14
EN 16 Incidents of and fines for non-compliance with all applicable international declarations/conventions/treaties, and national, sub-national, regional, and local regulations associated with environmental issues.	14

Introduction

1 Information in this report is structured using the core Global Reporting Initiative (**GRI**) environment performance indicators as a framework (www.globalreporting.org). The GRI is an independent institution whose mission is to develop and disseminate globally applicable sustainability reporting guidelines. These guidelines are for voluntary use by organisations for reporting

on the economic, environmental and social dimensions of their activities, products and services.

2 In this report, the Department of Parliamentary Services (**DPS**) addresses the environmental indicators relevant to its functions (indicators are prefixed with “EN”). DPS has reported against these indicators since 2003-04.

3 The role of DPS is to provide building management services and facilities for members of both legislative chambers, for parliamentary departments, and other users of the Parliamentary buildings and precincts. Parliament House is a building where more than 3,500 people work on sitting days, and which around 900,000 people visit each year. DPS has approximately 860 staff and an annual budget of around \$135m.

4 This report covers the three Departments within Parliament House. In addition to DPS, the Department of the Senate and the Department of the House of Representatives each has approximately 160 staff.

Materials

EN 1 Total materials use other than water, by type

5 Parliament House uses a wide variety of materials to support the efficient functioning of Parliament. Some of the items that have an impact on the environment are paper, fertiliser, IT equipment and chemicals. The number of separate organisations occupying Parliament House and the diverse functions they perform prevents DPS gathering accurate data against this indicator.

6 A measure taken to minimise the impact of materials use on the environment was considering energy efficiency ratings in purchasing decisions, including when the Department of the Senate replaced cocktail refrigerators in office suites with the highest energy-rated models (three star). Drivers of departmental vehicles were also encouraged to purchase “E10” petrol (10% ethanol blended) wherever possible.

7 Paper for printing press clippings was changed to recycled paper.

EN 2 Percentage of materials used that are wastes (processed or unprocessed) from sources external to the reporting organisation.

8 A small proportion of copy paper used had recycled content.

9 During 2006–07, DPS purchased 817.6 cubic metres of compost and mulch. This material was produced from organic waste.

Energy

EN 3 Direct energy use segmented by primary source

10 Each year, DPS is required by the Energy Efficiency in Government Operation’s Policy to report comprehensively on its energy consumption to the Australian Greenhouse Office (www.greenhouse.gov.au/government/energyuse/). DPS’s energy profile is comprised of energy consumed at Parliament House, transport energy, and the

electricity used at leased office space in West Block, a building located near Parliament House. DPS vacated the West Block building during the last quarter of 2006-07.

11 **Table 1** summarise energy use for each of these components in 2006–07.

Table 1: Energy consumed at Parliament House, West Block offices and by transport

Activity	Energy type / indicator	Value
Parliament House building	Electricity (kWh)	26,106,721 (93,984GJ)
	Natural Gas (GJ)	45,382
	Diesel (Generators & Boilers)(kL)	12 (480GJ)
	Green energy (kWh)	6,526,680
	Total GJ	139,846
	Area (m ²)	152,000
	MJ/Area (m ²)/annum	920
West Block office (tenant light and power)	Electricity (kWh)	272,690
	Green energy (kWh)	21,815
	Total GJ	982
	Occupancy (People)	74
	Area (m ²)	2,294
	MJ/Occupancy (People)/annum	13,266
	MJ/Area (m ²)/annum	428
Passenger vehicles	m ² /person	31
	LPG (kL)	5
	Petrol (kL)	59
	E-10 (kL)	6
Other transport (truck, gardening equipment and forklifts)	Total GJ	2,336
	Automotive Diesel (kL)	8
	LPG (kL)	2
	Petrol (kL)	3
Total for Parliament House, West Block Office, Passenger Vehicles and Other Transport (GJ)		143,636

12 **Table 1** shows that electricity and gas consumption at Parliament House comprised 97% of total energy use (139,366 of 143,636GJ). Gas is used for heating, domestic hot water and catering equipment. Electricity is used to provide a variety of services including office lighting, power, mechanical services, lifts, chillers, computer equipment, catering equipment, water features, central waste plant and boosted hot water heating.

Performance overview

13 During 2006–07, the primary energy used within Parliament House (electricity and gas) was 139,366 GJ, which is 1.3% lower than the electricity and gas consumed in 2005–06. Initiatives to conserve electricity included the continual monitoring and adjustment of the high electrical load plant, implementing more energy-efficient lighting schemes, and a trial of reduced airconditioning in summer.

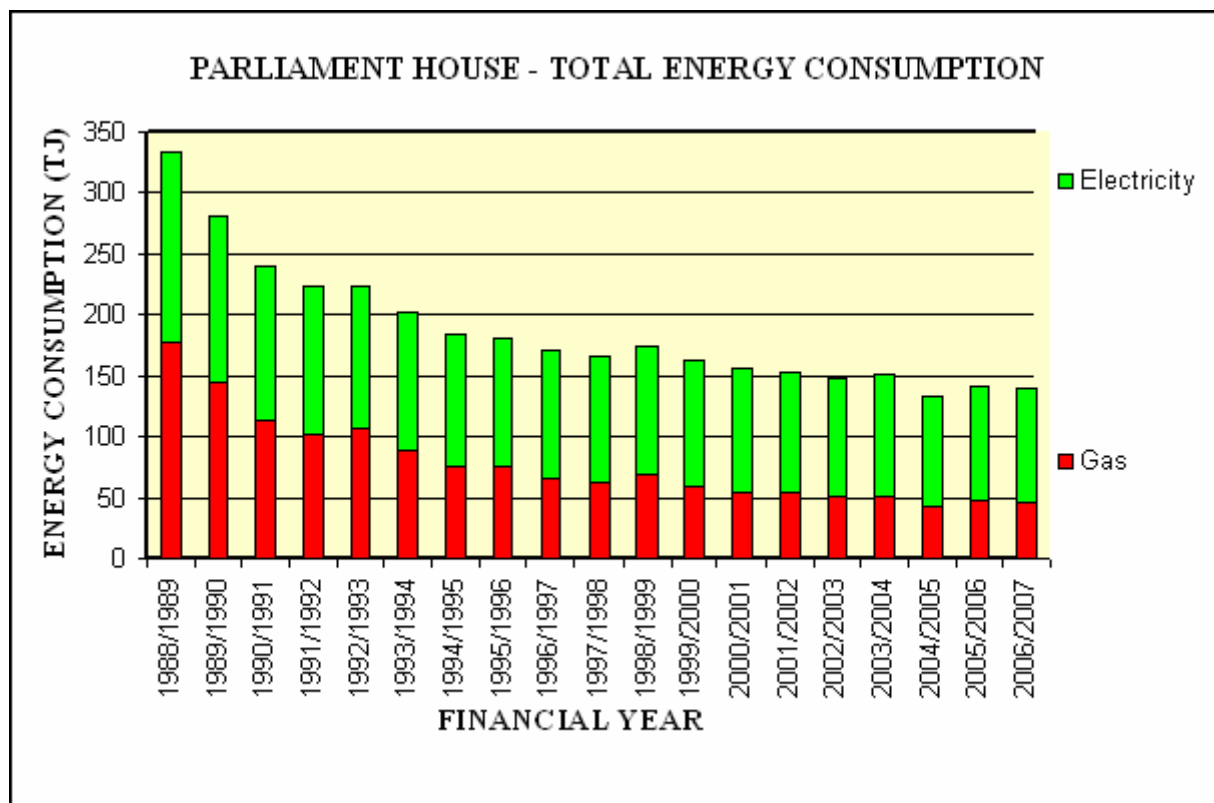
14 Twenty-five percent, or 6,526,680 kWhrs, of total electricity consumption at Parliament House was from “new” green (renewable) and “old” green (Snowy Hydro) energy. This contributed to reducing greenhouse gas emissions (see **paragraph 35**).

15 Since Parliament House was opened in 1988, DPS has achieved the following results;

- (a) electricity reduction of 39.7%;
- (b) gas reduction of 74.54%;
- (c) carbon dioxide emission equivalent reduction of 52.4%; and
- (d) energy (electricity and gas) consumption reduction of 58.3%.

16 The reduction in electricity and gas consumption is shown in **Figure 1**.

Figure 1: Annual electricity and gas consumption



17 Parliament House’s vehicle fleet consisted of 46 leased vehicles in 2006-07. This included vehicles disposed of when leases expired, new vehicles leased, and vehicles gained and lost with staff movements during the year. There were fifteen general pool vehicles in Parliament House’s fleet.

18 In 2003 the Government agreed on an environmental target which aims for 28% of government pool vehicles to have scores in the top half of the [Green Vehicle Guide](#)¹ by December 2005.

1 The Australian Greenhouse Office maintains the on-line Green Vehicle Guide (GVG) (www.greenvehicleguide.gov.au) to provide objective information about the environmental

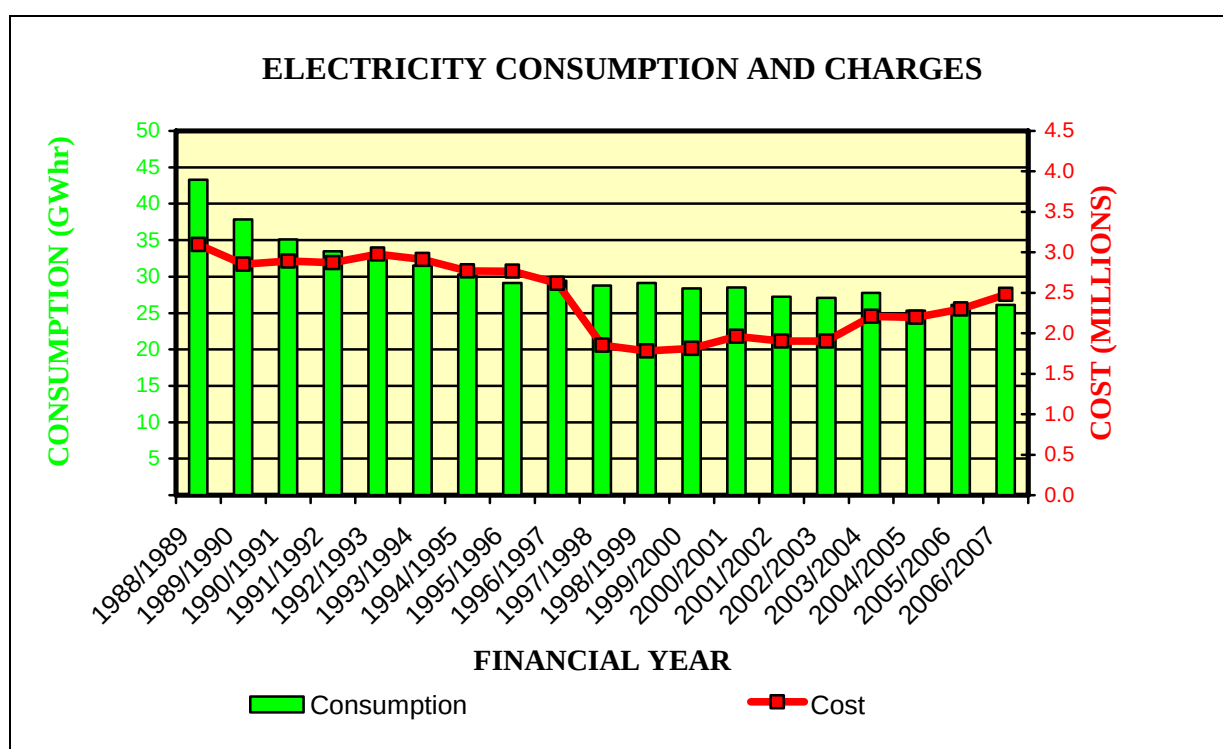
19 Two vehicles in Parliament House's total fleet scored higher than 10 in the Green Vehicle Guide and one of these was a pool vehicle. This represents 7% of general pool vehicles scoring higher than 10.

Electricity consumption

20 Electricity consumption during 2006–07 was 26,106,721 kWhrs, an increase of 0.03% compared with 2005–06 (**Figure 2**).

21 Electricity consumption is approximately 40% higher on a sitting day (meaning a day when the Parliament meets) compared with a non-sitting day. As there were 71 sitting days in 2006–07, which is four more days compared to 2005–06, a small increase in electricity consumption is a reasonable result.

Figure 2: Annual electricity consumption and charges



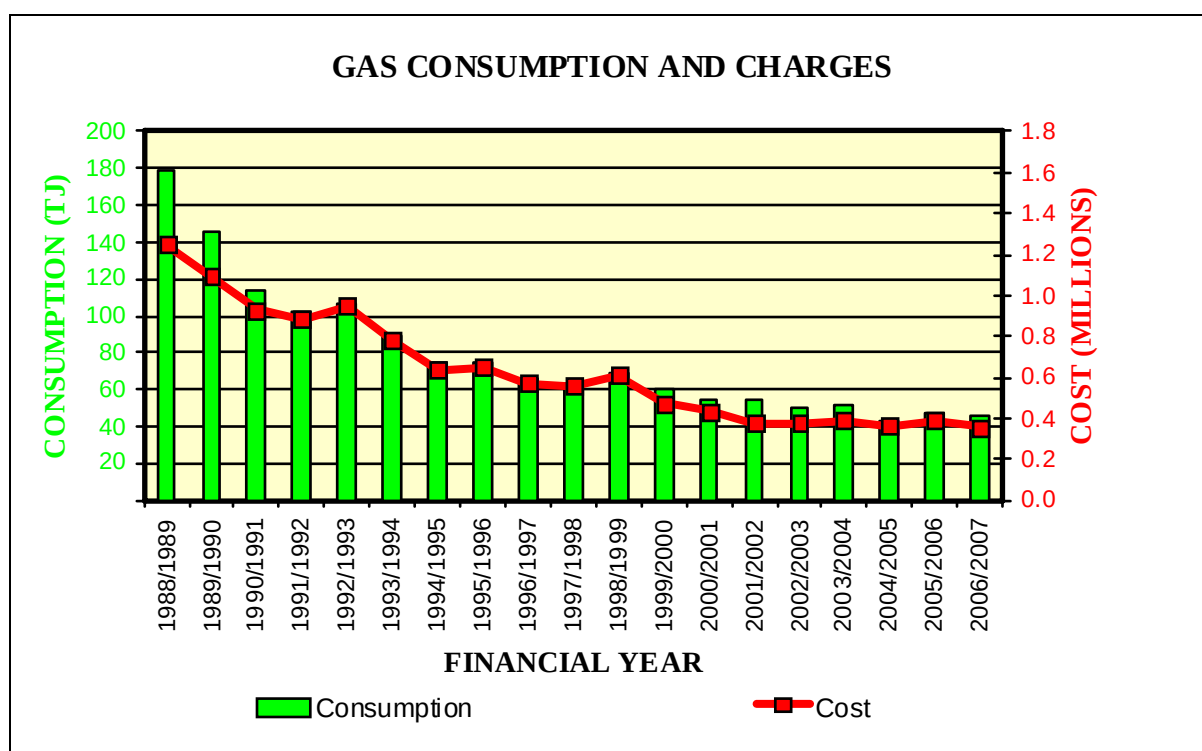
Gas Consumption

22 Gas consumption during 2006–07 was 45,382 GJ, a reduction of 4% compared to the previous year (47,307GJ) (**Figure 3**).

23 Gas consumption is approximately 35% higher on a sitting day compared with a non-sitting day. As there were four more sitting days in 2006–07 (see **paragraph 21**) a reduction in gas consumption is believed to be the result of milder winter weather and consequently a lower demand for heating.

performance of vehicles. The guide scores vehicles out of 20 based on air pollution, greenhouse emissions and fuel consumption. The better the performance of a vehicle in these areas, then the higher its score. The environmental target for government pool vehicles is set in the Environmental Strategy for the Motor Vehicle Industry (www.greenhouse.gov.au/transport/env_strategy.html#commonwealth).

Figure 3: Annual gas consumption and charges



EN 4 Indirect energy use

24 Indirect energy refers to the total amount of energy used to provide electricity to Parliament House. It is made up of two components:

- (a) combustion of fuel to produce the electricity Parliament House uses; and
- (b) energy used to extract the fuel and lost in delivery of electricity to Parliament House.

25 In 2006–07, 75% of Parliament House's electricity (19,580,041kWhrs) came from coal-fired power stations (the remainder was from renewable sources, including 15% produced from hydropower).

26 The indirect energy consumption for Parliament House in 2006–07 was 219,005GJ. The factor used to calculate indirect energy was based on the National Greenhouse Gas Inventory 2002 (Table 4-19) published by the Australian Greenhouse Office.

Water

EN 5 Total water use

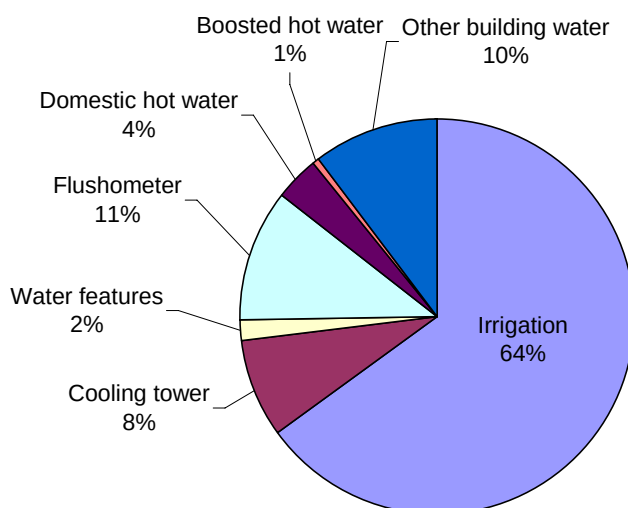
27 Water consumption for 2006–07 was 224,006 kL. This was a 17% decrease in water consumption compared to the previous year (270,421kL). The majority of water-saving initiatives undertaken were related to reducing landscape irrigation and turning off water features. These measures were taken to comply with Australian Capital Territory (**ACT**) water restrictions.

28 In November 2006, the ACT authorities introduced Stage 2 water restrictions. These were upgraded to Stage 3 restrictions in December 2006. Under Stage 3 restrictions, DPS was expected to reduce its water use by 35% of its use for the equivalent season in 2005–06.

29 The most significant water savings have been made in the Parliament House landscape. All 20 external water features in and around Parliament House have been turned off and emptied. Annual flower displays were not planted, and watering has been severely restricted in the grounds beyond Parliament Drive.

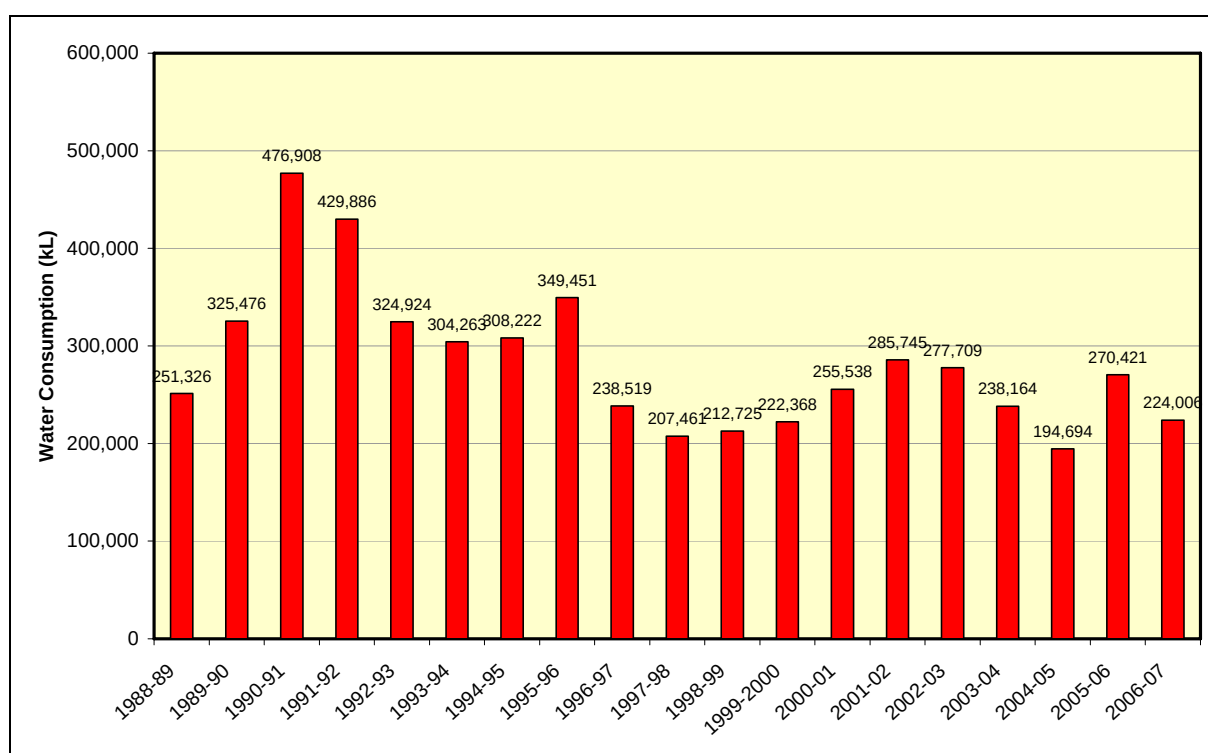
30 The consumption of water can be attributed to the following categories shown in **Figure 4**. “Other building water” includes the cold water used in bathrooms, kitchens and the swimming pool and the “flushometer” category refers to the water used for flushing toilets and urinals.

Figure 4: Water use during 2006–07



31 The following graph shows the consumption of water since the building was opened in 1988 (**Figure 5**). The consumption of water in 2006–07 was the fifth lowest since the building opened in 1988.

Figure 5: Annual water consumption



Biodiversity

EN 6 Location and size of land owned, leased, or managed in biodiversity-rich habitats

32 During 2006–07, DPS did not own or lease any land in biodiversity rich habitats.

EN 7 Description of the major impacts on biodiversity associated with activities and/or products and services in terrestrial, freshwater, and marine environments

33 During the year, there were no major impacts on biodiversity associated with activities and/or products and services in terrestrial, freshwater, and marine environments.

Emissions, effluents and waste

EN 8 Greenhouse gas emissions

34 DPS is a member of the Greenhouse Challenge Plus program and has reported on greenhouse gas emissions since 1997 (see www.greenhouse.gov.au/challenge).

35 During 2006–07, 24,290 tonnes carbon dioxide equivalent² (CO₂-e) were generated from energy consumption at Parliament House, the West Block office

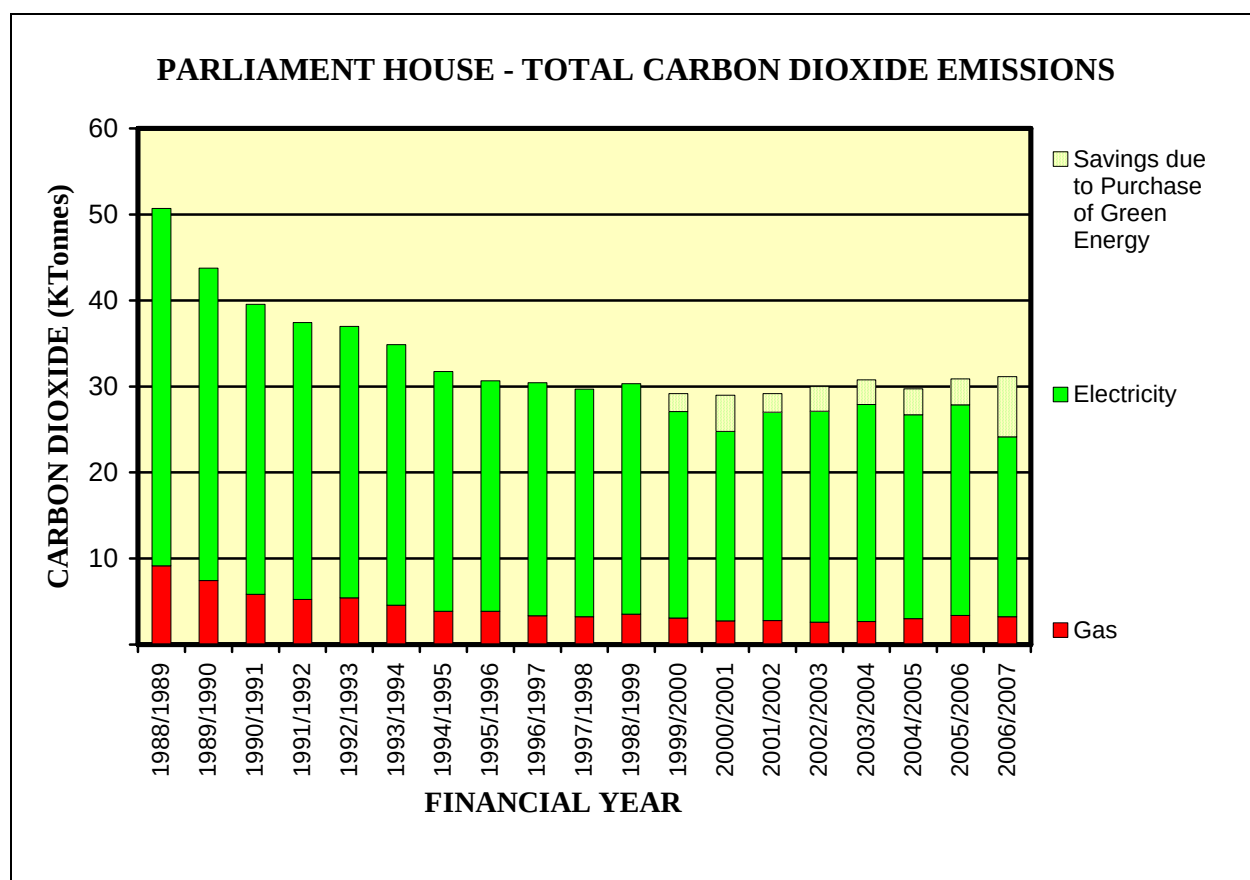
² Carbon dioxide equivalent, CO₂-e, is an internationally accepted measure that expresses the amount of global warming of greenhouse gases in terms of the amount of carbon dioxide (CO₂) that would have the same global warming potential.

tenancy and transport energy (energy use in these sectors is described in **Table 1**).

36 The majority of these emissions, 24,147 tonnes CO₂-e, were the result of consumption of electricity and gas at Parliament House. This amount was a 13% decrease in emissions compared with 2005–06 performance (27,891 tonnes CO₂-e from gas and electricity use).

37 **Figure 6** shows annual greenhouse gas emissions from Parliament House electricity and gas consumption since the building was opened in 1988.

Figure 6: Annual greenhouse gas emissions (from electricity and gas consumption)



EN 9 Use and emissions of ozone depleting substances

38 Parliament House uses refrigerants that contain ozone depleting substances. These are used for:

- (a) chillers, which provide cooling for the building's air conditioning;
- (b) coolrooms;
- (c) freezers; and
- (d) refrigerators.

39 **Table 2** shows the quantity and “ozone depletion potential” of refrigerants used in 2006–07.

Table 2: Quantity and “ozone depletion potential” of refrigerants used in 2006–07

Refrigerant	Qty Used (kg)	Ozone Depletion Potential	CFC-11 equivalent (kg)	CO ₂ equivalent (Kg)
404A	64	0	0	208,640
R409A	22	0.048	1.056	34,320
R134a	65	0	0	84,500
SPE34E	22	0	0	28,160
Total	173			355,620

40 Parliament House used 21 kg more refrigerant in 2006–07 than the previous year. This is the first reporting period that tonnes CO₂-e have been calculated for refrigerant use.

EN 10 NO_x, SO_x, and other significant air emissions by type

41 The combustion of natural gas for heating, hot water and cooking purposes generated oxides of nitrogen (**NO_x**), oxides of sulfur (**SO_x**) and other air pollutants from Parliament House. Each year, DPS reports on these emissions to the National Pollution Inventory (www.npi.gov.au). **Table 3** lists the quantity of air pollutants emitted from combustion of natural gas in 2006–07.

Table 3: Emissions of air pollutants from natural gas consumption in 2006–07

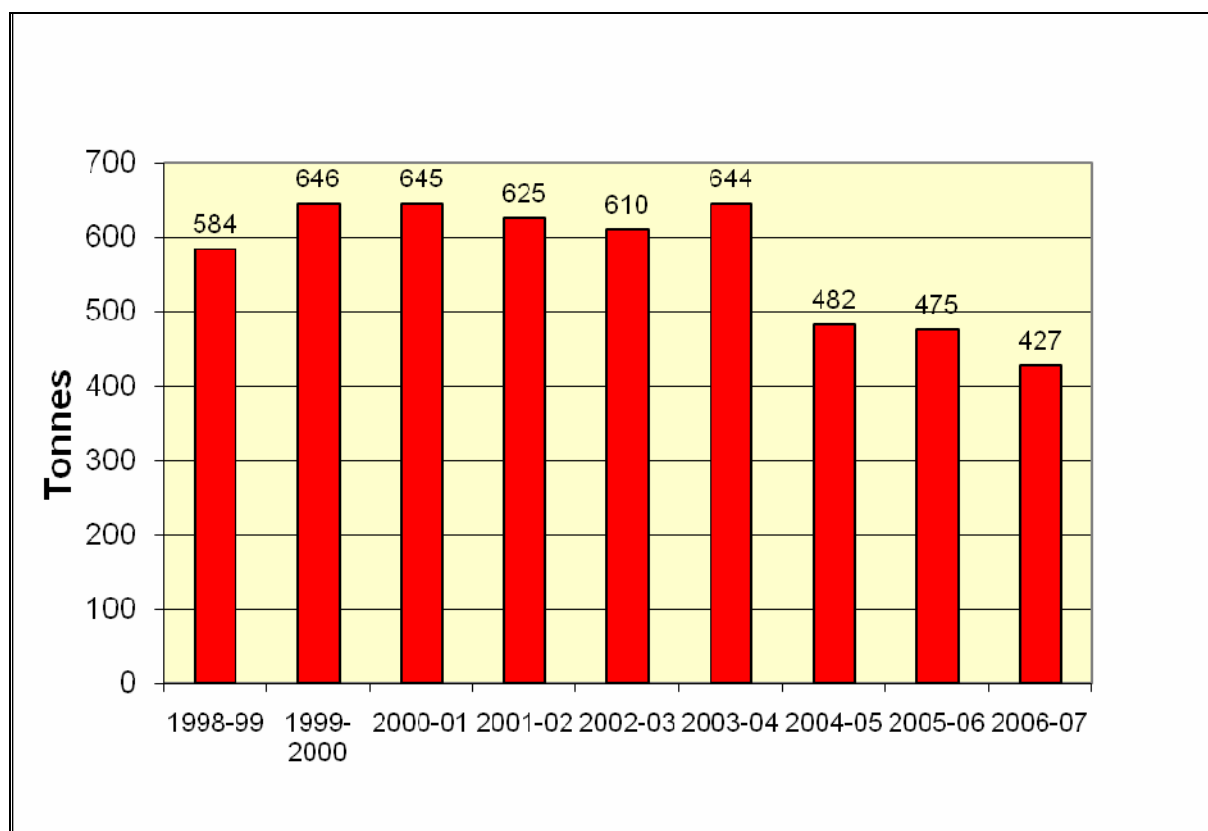
Substance	Total emissions (kg)
Carbon monoxide	1,800
Oxides of nitrogen	2,100
Particulate matter (PM10)	160
Total Volatile organic compounds	110
Sulfur dioxide	11
Polycyclic aromatic hydrocarbons	<1 (0.014)

EN 11 Total amount of waste by type and destination

Waste to landfill

42 The amount of general waste sent to landfill was 427 tonnes in 2006–07, which is 10% less waste disposed than the year before (475 tonnes) (**Figure 7**). Waste disposed to landfill includes all general waste sent to landfill from the operations of Parliament House. It does not include waste generated from large construction projects or landscape waste.

Figure 7: Annual general waste disposed to landfill

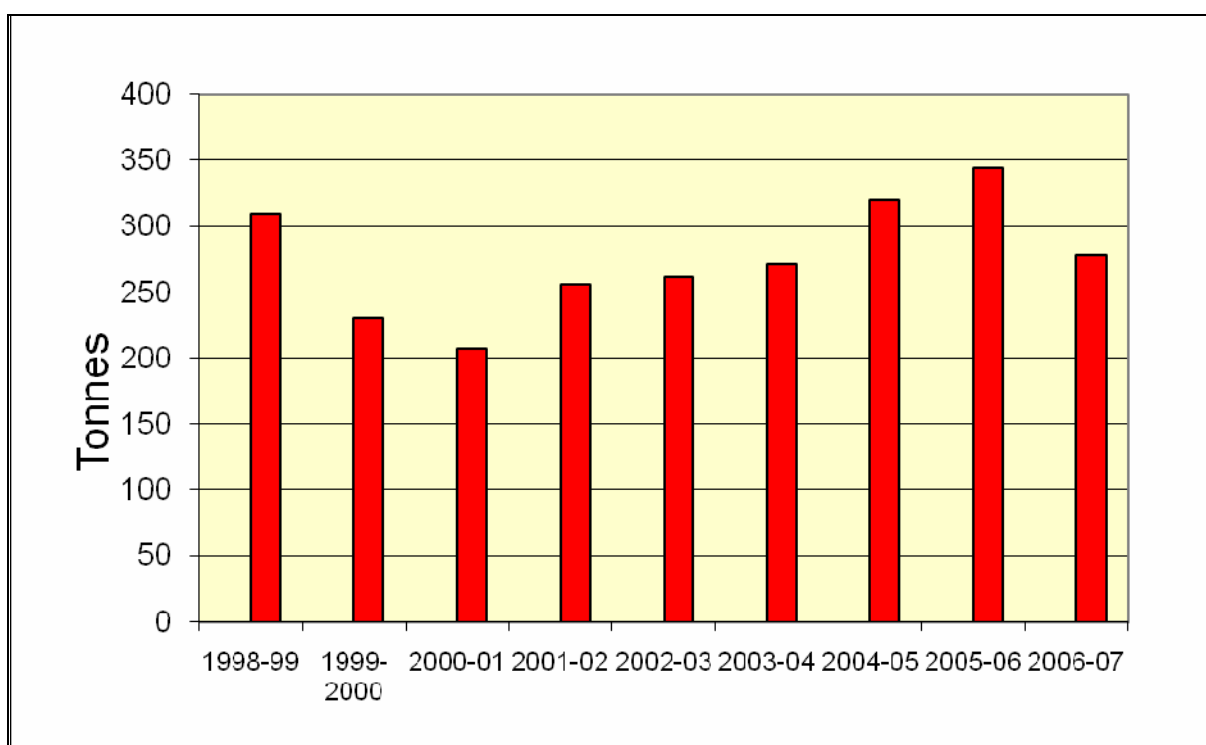


Recycled Waste

43 Wastes recycled at Parliament House are paper, cardboard, co-mingled materials, printer cartridges, lamps, used oil, grease, batteries, landscape and construction waste (eg metal).

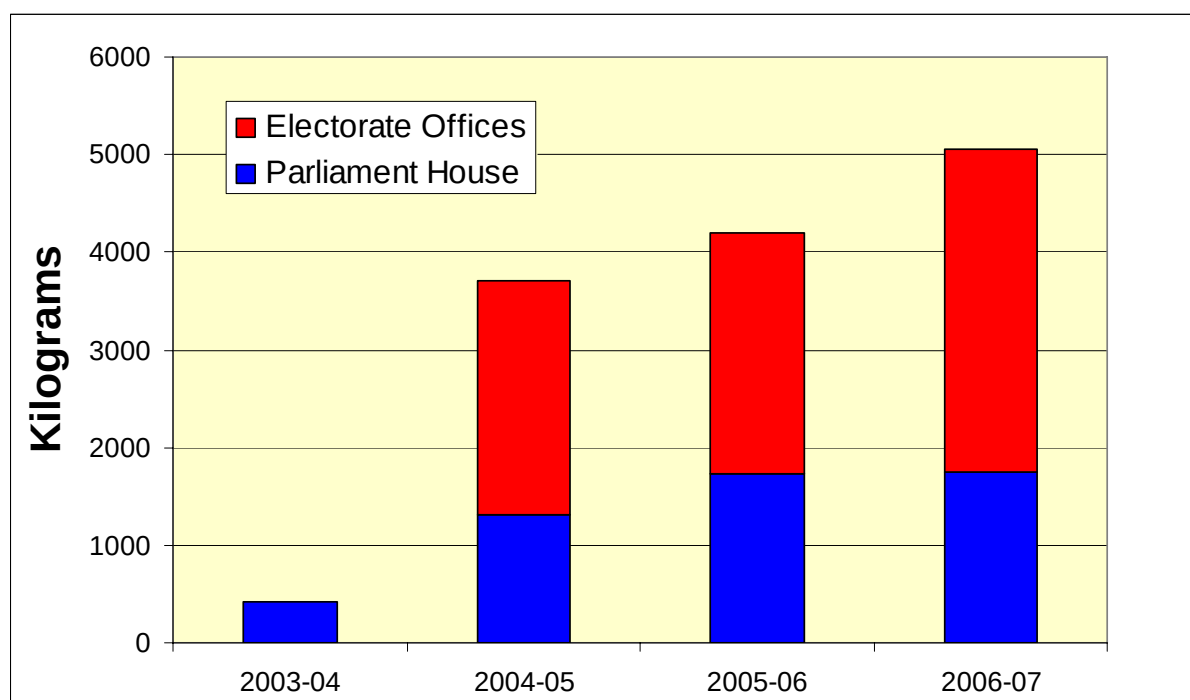
44 Recycled paper waste is defined as recycled paper, cardboard and classified paper waste. The quantity of recycled paper waste was 279 tonnes in 2006–07, which is a decrease of 24% compared to 2005–06 (345 tonnes) (**Figure 8**). DPS believes that the paper recycling rate can be increased with a strategy to increase awareness of the Parliament House paper recycling system.

Figure 8: Annual recycled paper waste



45 Printer cartridge recycling facilities enabled 1,747 kg of toner cartridges being recycled from Parliament House (an increase of approximately 11 kg compared to 2005–06). Cartridge recycling facilities in electorate offices resulted in 3,300kg of cartridges being recycled, which is an increase of approximately 846 kg or 34% compared to 2005–06. This resulted in more than five tonnes of cartridge materials being diverted from landfill (shown in **Figure 9**).

Figure 9: Annual cartridge recycling for Parliament House and electorate offices



46 The recycling of lamps, grease, used oil, metals and batteries, glass and some commingled material added to recycling results at Parliament House.

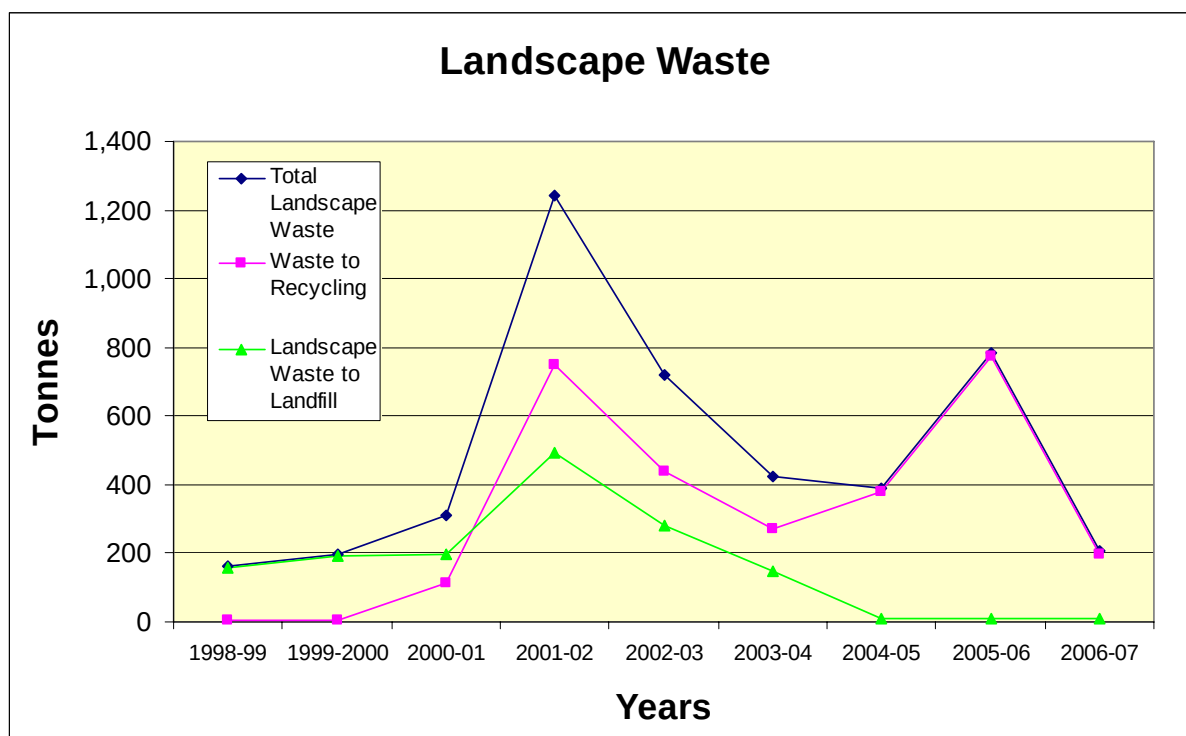
Landscape Waste

47 The preferred method for disposing of green waste at Parliament House is to chip the material on-site and re-use in the landscape. The amount of chipped material is not recorded. When waste generated in the landscape cannot be chipped on-site (due to volume, composition or resources) then the material is taken off-site to be recycled or disposed to landfill. The total waste taken off-site is recorded and reported as “landscape waste”.

48 During 2006–07, 205 tonnes of landscape waste³ was generated from the Parliament House landscape. Ninety-five per cent of the landscape waste went to a recycling facility. The remainder, comprising of non-biodegradable materials, was disposed to landfill.

49 **Figure 10** shows trends in landscape waste and recycling since the building opened in 1988.

Figure 10: Annual landscape waste recycled off-site and disposed to landfill



EN 12 Significant discharges to water by type

50 Based on water consumed for purposes other than irrigation, it is estimated that 80 ML is discharged into the sewerage system (actual discharge is not monitored). The sewerage is required under a trade waste agreement to be

³ Landscape waste is recorded and monitored separately from general waste (**paragraph 42**). It comprises the waste generated in the landscape that is taken off-site to be recycled or landfilled.

equivalent to domestic strength. There are a number of installed systems to control trade waste from entering the sewerage system. These include:

- (a) grease traps on all of the kitchens (which are cleaned out every three months);
- (b) coalescing plate filter on the vehicle washdown bay (to prevent oil from entering the sewer); and
- (c) system to remove paint solids from paint brush washing facilities before they enter the sewer.

51 There was no measurable leachate runoff from the site into the surrounding waterways during the reporting period.

EN 13 Significant spills of chemicals, oils, and fuels in terms of total number and total volume

52 In 2006–07 there were no spills of chemicals, oils and fuels from Parliament House.

53 Procedures are in place to minimise the risk of such incidents occurring and necessary materials are maintained in strategic areas throughout the parliamentary precincts to manage such an incident should it occur.

Products and services

EN 14 Significant environmental impacts of principal products and services

54 During 2006–07 Parliament House did not produce any products or services that had significant environmental impacts.

EN 15 Percentage of the weight of products sold that is reclaimable at the end of the products' useful life and percentage that is actually reclaimed

55 During 2006–07 Parliament House did not sell any products that are reclaimable at the end of the product's useful life.

Compliance

EN 16 Incidents of and fines for non-compliance with all applicable international declarations/conventions/treaties, and national, sub-national, regional, and local regulations associated with environmental issues.

56 During 2006–07 there were no instances of fines for non compliance with any regulations associated with environmental issues.