MARCH 1999

4602.0

Australian Bureau of Statistics

# ENVIRONMENTAL ISSUES

PEOPLE'S VIEWS AND PRACTICES

EMBARGO: 11:30AM (CANBERRA TIME) THUR 23 DEC 1999

## CONTENTS



■ For more information about these and related statistics, contact Bob Harrison on Canberra 02 6252 7369, or Client Services in any ABS office as shown on the back cover of this publication.

# NOTES

## ABOUT THIS PUBLICATION

This publication is the fifth of its type and provides data on environmental behaviour and practices of Australian households and individuals collected in 1999. Respondents were aged 18 years or older. The topics covered include environmental attitudes and concerns, energy conservation measures such as insulation, energy sources and use (including use of greenpower), and household appliances.

## ABOUT THE SURVEY

The data in this publication is derived from two Australian Bureau of Statistics (ABS) surveys: the Population Survey Monitor (data in chapter 1), and a supplement to the Monthly Population Survey (data in chapters 2, 3 and 4). Please refer to the Explanatory Notes at the back of this publication for further details on these surveys.

## DATA COMPARABILITY

A core set of data has been collected in 1992, 1994, 1996, 1998 and 1999. It is envisaged that this data will be collected again in 2001. Please see the article in the explanatory notes of this publication which discusses attitudinal data. This core data appears in chapter 1. A set of changing topics rotate over a period of three years. The topics contained in this publication compare with data collected in June 1994. Where applicable the data has been included in this publication for comparison purposes.

## SYMBOLS AND OTHER USAGES

| | |
|---|---|
| ABS | Australian Bureau of Statistics |
| PSM | Population Survey Monitor |
| RSE | Relative standard error |
| SE | Standard error |
| * | subject to sampling variability too high for most practical purposes (i.e. relative standard error greater than 25%) |
| — | nil or rounded to zero |
| . . | not applicable |

## ROUNDING

Where figures have been rounded, discrepancies may occur between sums of the component items and totals. Published percentages are calculated prior to rounding of the figures and therefore some discrepancy may occur between these percentages and those that could be calculated from the rounded figures.

W. McLennan
Australian Statistician

# CHAPTER 1 ENVIRONMENTAL VIEWS, CONCERNS AND ISSUES

## MAIN FINDINGS

- Environment was one of a number of social issues asked about in the survey. All respondents within the scope of the survey, who were aged 18 years and over, were asked to nominate the social issue that was *most* important to them from a list of six options - crime, education, environmental problems, health, interest rates, and unemployment.
- The social issue reported as "most important" in 1999 was health (30% of people), as it was in 1998. This was followed by crime (26%), education (17%), and unemployment (13%). Environmental problems were nominated as the most important social issue by 9% of respondents. In 1996 (when this question was first asked) crime was the most important social issue (26% of respondents).
- Respondents who did not indicate environmental problems as their most important social issue were asked whether or not they were concerned about any environmental problems. In 1999, 69% of people reported having environmental concerns, compared with 71% in 1998, 68% in 1996, 69% in 1994, and 75% in 1992. Field testing by the ABS in August/September 1998 showed that 57% of respondents changed their concerns about the environment over a four–week period. This high response variance suggests that some beliefs or feelings are perhaps weakly held. For that reason, caution should be exercised in interpreting the results. See paragraph 12 of the Explanatory Notes for more details.
- The survey revealed that the people who were most likely to nominate environmental problems as the most important social issue were aged between 18 and 24 years, compared with the 25–34 years age group in 1998.
- Forty three per cent reported that they felt that over the last 10 years the quality of the environment had declined (compared to 46% in 1998 and 44% in 1996). There were 27% of people who believed the quality of the environment had stayed the same, and 25% stated they thought it had improved over the last 10 years (the same percentage as in 1998).
- Air pollution continues to be the environmental problem of greatest concern for Australians, with 29% of people reporting this as their major concern. This compares with 32% in 1998, 31% of people in 1996, 34% in 1994, and 40% in 1992.

## ENVIRONMENT AND SOCIAL/ECONOMIC CONCERNS

In 1999 Australians considered the most important social issue to be health (30%), followed by crime (with 26%), education (17%) and unemployment (13%). Crime was the primary concern in Western Australia (39%), up from 35% in 1998. Other States and Territories where crime was the major issue were New South Wales (29%) and the Northern Territory (27%) and Queensland (26%). The Australian Capital Territory recorded the lowest level of concern by respondents for crime (with 18%). Environmental problems were an issue for 9% of survey respondents, and rated highest for people in the Northern Territory (12%) and lowest for those in Tasmania (7%).

### **1.1** MOST IMPORTANT SOCIAL ISSUES

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % |
| | | | | | 1999(b) | | | | |
| Crime | 27.8 | 18.5 | 26.2 | 21.9 | 39.0 | 23.3 | 27.1 | 17.9 | 25.5 |
| Education | 17.0 | 17.3 | 16.8 | 14.4 | 14.1 | 15.3 | *20.6 | 20.7 | 16.6 |
| Environmental problems | 8.4 | 10.0 | 8.1 | 9.3 | 10.6 | *6.6 | *11.6 | *10.4 | 9.0 |
| Health | 29.4 | 33.7 | 27.2 | 33.8 | 22.2 | 29.1 | *22.1 | 30.8 | 29.7 |
| Interest rates | 3.2 | 3.0 | 3.7 | *2.1 | 2.6 | *2.7 | *4.7 | *3.5 | 3.1 |
| Unemployment | 10.6 | 14.4 | 15.9 | 16.2 | 10.2 | 21.1 | *11.1 | 15.4 | 13.3 |
| Can't decide/don't know | 3.5 | 3.0 | 2.2 | 2.4 | *1.4 | *1.9 | *2.7 | *1.4 | 2.8 |
| | | | | | 1998 | | | | |
| Crime | 26.0 | 16.0 | 26.6 | 20.7 | 35.3 | 19.6 | 27.2 | 17.0 | 23.8 |
| Education | 15.7 | 17.0 | 15.8 | 17.2 | 17.6 | 13.8 | 22.3 | 19.2 | 16.4 |
| Environmental problems | 8.9 | 9.0 | 7.8 | 8.5 | 8.1 | 7.5 | 9.2 | 11.0 | 8.6 |
| Health | 28.2 | 33.9 | 26.5 | 28.9 | 22.4 | 29.6 | 21.6 | 26.9 | 28.8 |
| Interest rates | 2.9 | 3.7 | 3.4 | 3.5 | 2.5 | 1.6 | 6.1 | 3.5 | 3.2 |
| Unemployment | 14.3 | 18.2 | 17.7 | 18.7 | 11.7 | 25.7 | 11.8 | 20.1 | 16.4 |
| Can't decide/don't know | 3.9 | 2.3 | 2.0 | 2.5 | 2.4 | 2.2 | *1.8 | 2.2 | 2.8 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Refer to Explanatory Notes, point 6.

ENVIRONMENT AND SOCIAL/ECONOMIC CONCERNS *continued*

Health as a social issue was highest for older people, with half of those aged 65 and over selecting it as their major social issue (51%). Conversely, people aged between 18 and 24 were the age group least concerned with health (21%). The 18–24 years age group rated highest for environmental problems (14%) and unemployment (19%).

**1.2** MOST IMPORTANT SOCIAL ISSUES, By Age

| | AGE GROUP (YEARS) | | | | | | |
|---|---|---|---|---|---|---|---|
| | *18–24* | *25–34* | *35–44* | *45–54* | *55–64* | *65 and over* | *Total* |
| | % | % | % | % | % | % | % |
| | 1999(b) | | | | | | |
| Crime | 23.3 | 26.3 | 24.3 | 27.2 | 27.0 | 24.6 | 25.5 |
| Education | 17.4 | 19.9 | 26.7 | 15.2 | 7.4 | 6.4 | 16.6 |
| Environmental problems | 13.6 | 11.0 | 8.7 | 8.2 | 7.3 | 5.3 | 9.0 |
| Health | 20.7 | 23.6 | 21.8 | 26.8 | 41.3 | 51.0 | 29.7 |
| Interest rates | 3.6 | 4.7 | 2.6 | 2.9 | 2.5 | 2.0 | 3.1 |
| Unemployment | 18.6 | 11.5 | 12.7 | 17.5 | 12.1 | 7.8 | 13.3 |
| Can't decide/don't know | 2.9 | 2.9 | 3.1 | 2.2 | 2.4 | 3.0 | 2.8 |
| | 1998 | | | | | | |
| Crime | 22.5 | 22.8 | 25.1 | 24.4 | 25.7 | 22.0 | 23.8 |
| Education | 18.2 | 21.1 | 25.1 | 14.3 | 6.3 | 6.6 | 16.4 |
| Environmental problems | 11.0 | 12.5 | 8.9 | 7.1 | 7.1 | 3.7 | 8.6 |
| Health | 22.4 | 21.6 | 19.7 | 26.7 | 38.3 | 52.5 | 28.8 |
| Interest rates | 2.8 | 5.2 | 3.0 | 3.0 | 2.8 | 1.7 | 3.2 |
| Unemployment | 21.4 | 15.0 | 16.0 | 21.4 | 16.6 | 8.1 | 16.4 |
| Can't decide/don't know | 1.8 | 1.7 | 2.2 | 3.0 | 3.2 | 5.4 | 2.8 |

(b) Refer to Explanatory Notes, point 6.

## ENVIRONMENTAL CONCERNS

Respondents who did not indicate environmental problems as their most important social issue were asked whether or not they were concerned about any environmental problems.

There were 69% of such Australians who stated that they were concerned about environmental problems in 1999, a slight fall from the survey conducted in 1998 (71%), and less than the 75% who expressed concern when this survey was first conducted in May 1992. People in Western Australia indicated the highest level of concern (76%), while the lowest was recorded in Tasmania (57% compared with 65% in 1998).

### 1.3 PERSONS CONCERNED ABOUT ENVIRONMENTAL PROBLEMS

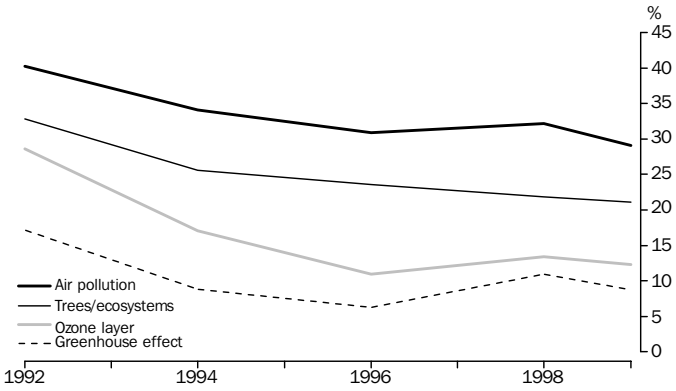
| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % |
| **1999(b)** | | | | | | | | | |
| Yes | 69.7 | 68.1 | 65.6 | 67.9 | 75.6 | 57.0 | 67.9 | 70.7 | 68.7 |
| No | 28.1 | 30.1 | 33.2 | 30.2 | 23.4 | 41.8 | 30.7 | 28.5 | 29.6 |
| Don't know | 2.2 | 1.8 | 1.2 | *1.9 | *1.0 | *1.3 | *1.5 | *0.8 | 1.7 |
| **1998** | | | | | | | | | |
| Yes | 73.0 | 70.7 | 67.5 | 72.5 | 72.5 | 64.6 | 70.3 | 76.0 | 71.1 |
| No | 24.1 | 28.1 | 31.2 | 25.3 | 25.8 | 34.2 | 28.6 | 23.1 | 26.9 |
| Don't know | 3.0 | 1.2 | 1.3 | 2.2 | 1.7 | *1.2 | *1.1 | *0.9 | 1.9 |
| **APRIL 1996** | | | | | | | | | |
| Yes | 66.5 | 70.5 | 66.8 | 72.6 | 70.8 | 58.1 | 66.1 | 75.1 | 68.4 |
| No | 31.0 | 27.7 | 32.0 | 25.8 | 28.4 | 41.0 | 33.9 | 24.3 | 29.8 |
| Don't know | 2.5 | 1.8 | 1.3 | 1.6 | 0.8 | *0.8 | — | *0.6 | 1.8 |
| **JUNE 1994** | | | | | | | | | |
| Yes | 69.2 | 67.2 | 68.5 | 73.0 | 70.1 | 61.3 | 77.2 | 74.2 | 68.9 |
| No | 27.8 | 30.5 | 29.1 | 25.6 | 27.1 | 37.0 | 25.3 | 24.9 | 28.6 |
| Don't know | 2.9 | 2.2 | 2.4 | 1.5 | 2.8 | 1.7 | 2.5 | *0.9 | 2.5 |
| **MAY 1992** | | | | | | | | | |
| Yes | 73.6 | 75.2 | 74.0 | 77.0 | 76.0 | 70.7 | 79.6 | 83.5 | 74.8 |
| No | 24.1 | 22.2 | 24.0 | 21.4 | 21.8 | 28.2 | 17.7 | 14.4 | 23.0 |
| Don't know | 2.3 | 2.6 | 1.9 | 1.5 | 2.2 | 1.1 | 2.7 | 2.1 | 2.2 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Refer to Explanatory Notes, point 6.

ENVIRONMENTAL CONCERNS *continued*

**1.4** SELECTED ENVIRONMENTAL CONCERNS




Air pollution remains the environmental problem of greatest concern (29%), although there has been a drop in concern compared with 1998, when 32% of respondents were concerned about this issue. Air pollution is followed closely by freshwater pollution (25%) and ocean/sea pollution (22%). 'Other pollution' is of least concern as an environmental issue (4%), whereas overpopulation was the least concern in 1998.

New South Wales rated highest for air pollution (35%, compared with 38% in 1998) and Tasmania the lowest (18%, compared with 24% in 1998). The concern most frequently nominated in South Australia was freshwater pollution (30%), in the Northern Territory the destruction of trees and ecosystems (25%), and in Tasmania freshwater pollution (19%).

**1.5** ENVIRONMENTAL CONCERNS(a)

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(b)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % |
| | | | | | 1999(c) | | | | |
| Air pollution | 35.0 | 28.3 | 23.7 | 21.9 | 29.8 | 17.6 | *22.4 | 26.5 | 29.1 |
| Freshwater pollution | 29.0 | 22.0 | 21.6 | 29.7 | 18.4 | 18.7 | *22.5 | 26.1 | 24.6 |
| Ocean/sea pollution | 25.5 | 18.9 | 22.8 | 26.9 | 18.0 | 18.3 | 24.9 | 19.6 | 22.4 |
| Destruction of trees/ecosystems | 20.2 | 19.1 | 20.2 | 15.5 | 36.1 | 18.5 | 25.0 | 24.4 | 21.1 |
| Garbage/rubbish disposal | 16.6 | 14.5 | 11.3 | 14.2 | 9.0 | 11.7 | *17.7 | 15.5 | 14.1 |
| Ozone layer | 14.4 | 13.8 | 8.3 | 10.3 | 10.8 | 8.0 | *12.2 | 13.3 | 12.3 |
| Toxic chemicals/hazardous waste | 12.3 | 12.0 | 10.3 | 10.5 | 7.2 | 5.9 | *11.9 | *8.4 | 11.0 |
| Soil erosion/salinity | 10.2 | 10.0 | 8.7 | 10.0 | 14.1 | *5.8 | *14.1 | 13.0 | 10.2 |
| Greenhouse effect | 11.8 | 8.5 | 6.1 | 6.5 | 6.2 | *4.4 | *9.1 | 11.7 | 8.7 |
| Destruction of animals/wildlife | 9.6 | 6.4 | 8.0 | 6.9 | 5.7 | *4.4 | *10.2 | *9.6 | 7.8 |
| Conservation/preservation of resources | 8.7 | 6.9 | 5.4 | 6.9 | 6.0 | *4.7 | *8.6 | *8.1 | 7.1 |
| Irresponsible urban development | 9.6 | 4.1 | 6.1 | 3.7 | 2.8 | *1.0 | *7.6 | *5.7 | 6.1 |
| Use of pesticides | 7.2 | 5.2 | 5.7 | 4.6 | 3.0 | *3.4 | *5.2 | *4.0 | 5.6 |
| Uranium mining/radioactive materials | 6.9 | 6.7 | 3.0 | 4.2 | 4.4 | *2.3 | *12.4 | *6.3 | 5.6 |
| Nuclear testing/weapons | 7.6 | 5.0 | 3.8 | 2.6 | 2.2 | *1.8 | *3.8 | *4.6 | 5.1 |
| Overpopulation | 7.1 | 2.9 | 2.9 | *1.3 | *1.8 | *1.4 | *4.0 | *3.9 | 4.1 |
| Other pollution | 4.9 | 4.0 | 3.5 | 2.9 | 2.0 | *2.2 | *2.7 | *2.8 | 3.9 |
| Other | 2.7 | 4.0 | 4.3 | 2.9 | 3.9 | *3.4 | *2.3 | *4.7 | 3.5 |
| Don't know | 2.8 | 2.3 | 1.9 | *2.2 | *1.5 | *1.8 | *1.7 | *1.7 | 2.3 |
| No concerns | 28.1 | 30.1 | 33.2 | 30.2 | 23.4 | 41.8 | 30.7 | 28.5 | 29.6 |

(a) Totals do not equal the sum of items in each column because more than one item may be specified.

(b) Northern Territory data refers to mainly urban areas only.

(c) Refer to Explanatory Notes, point 6.

## 1.5 ENVIRONMENTAL CONCERNS *continued*

| | NSW | Vic. | Qld | SA | WA | Tas. | NT | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % |
| **1998** | | | | | | | | | |
| Air pollution | 38.1 | 32.1 | 24.8 | 25.0 | 35.0 | 24.2 | 24.8 | 30.3 | 32.2 |
| Freshwater pollution | 34.4 | 21.1 | 22.1 | 31.0 | 24.7 | 25.8 | 21.9 | 33.5 | 27.3 |
| Ocean/sea pollution | 26.4 | 20.7 | 22.8 | 27.5 | 22.0 | 23.4 | 25.5 | 22.8 | 23.8 |
| Destruction of trees/ecosystems | 20.7 | 22.5 | 21.8 | 19.1 | 26.2 | 20.8 | 24.4 | 21.9 | 21.8 |
| Garbage/rubbish disposal | 15.4 | 16.1 | 11.7 | 15.6 | 12.2 | 13.6 | 16.4 | 14.3 | 14.6 |
| Ozone layer | 14.7 | 15.5 | 10.1 | 12.7 | 10.9 | 10.1 | 13.6 | 11.9 | 13.4 |
| Toxic chemicals/hazardous waste | 11.6 | 13.6 | 10.2 | 11.7 | 8.0 | 6.3 | 10.9 | 8.7 | 11.3 |
| Greenhouse effect | 14.0 | 11.3 | 8.0 | 8.7 | 6.9 | 7.6 | 11.0 | 12.9 | 10.9 |
| Soil erosion/salinity | 10.2 | 10.4 | 6.4 | 10.5 | 11.7 | 8.6 | 13.3 | 16.8 | 9.8 |
| Destruction of animals/wildlife | 12.7 | 8.9 | 7.4 | 8.5 | 6.6 | 6.9 | 9.7 | 8.6 | 9.6 |
| Conservation/preservation of resources | 8.5 | 7.4 | 6.0 | 7.3 | 5.7 | 4.9 | 7.8 | 8.2 | 7.3 |
| Nuclear testing/weapons | 9.7 | 7.1 | 5.3 | 4.1 | 4.7 | 4.6 | 6.5 | 3.4 | 7.0 |
| Use of pesticides | 6.5 | 5.9 | 5.7 | 6.3 | 5.1 | 4.2 | 7.1 | 4.5 | 6.0 |
| Uranium mining/radioactive materials | 7.7 | 6.5 | 3.3 | 4.5 | 4.5 | 3.2 | 12.2 | 4.9 | 5.9 |
| Irresponsible urban development | 7.4 | 5.1 | 5.5 | 3.2 | 3.8 | 3.0 | 7.2 | 4.3 | 5.6 |
| Other pollution | 6.4 | 4.0 | 4.3 | 1.6 | 3.7 | 2.9 | 2.3 | 2.2 | 4.6 |
| Other | 4.3 | 2.1 | 3.8 | 4.2 | 5.9 | 4.6 | *1.6 | 5.4 | 3.8 |
| Overpopulation | 5.7 | 3.2 | 2.8 | 1.3 | 2.3 | 2.1 | 5.0 | 3.7 | 3.7 |
| No concerns | 24.1 | 28.1 | 31.2 | 25.3 | 25.8 | 34.2 | 28.6 | 23.1 | 26.9 |
| Don't know | 3.8 | 2.3 | 2.1 | 2.9 | 2.3 | 1.5 | *1.1 | 2.1 | 2.8 |
| **APRIL 1996** | | | | | | | | | |
| Air pollution | 32.9 | 33.9 | 25.9 | 28.8 | 31.0 | 20.3 | 21.7 | 29.0 | 30.9 |
| Freshwater pollution | 24.7 | 21.3 | 23.0 | 31.4 | 21.2 | 21.4 | 18.1 | 29.1 | 23.7 |
| Ocean pollution | 24.9 | 21.7 | 24.8 | 25.1 | 23.0 | 21.3 | 18.3 | 25.0 | 23.8 |
| Destruction of trees/ecosystems | 21.5 | 23.5 | 25.2 | 23.4 | 26.1 | 23.9 | 30.0 | 33.8 | 23.6 |
| Garbage/rubbish disposal | 13.6 | 16.2 | 10.6 | 18.2 | 13.2 | 10.9 | 9.3 | 13.6 | 14.0 |
| Ozone layer | 9.6 | 13.4 | 9.4 | 11.2 | 11.5 | 9.1 | 14.2 | 11.0 | 10.9 |
| Toxic/chemical waste | 7.8 | 9.3 | 8.0 | 9.5 | 9.9 | 9.0 | *7.2 | 8.5 | 8.6 |
| Greenhouse effect | 6.6 | 7.6 | 4.6 | 5.1 | 6.4 | 4.5 | *6.1 | 10.4 | 6.3 |
| Soil erosion/salinity/land degradation | 7.2 | 8.5 | 6.1 | 7.0 | 10.2 | 7.0 | *8.6 | 14.5 | 7.7 |
| Destruction of animals/wildlife/extinction | 9.4 | 8.8 | 9.8 | 8.1 | 8.2 | 5.8 | 12.6 | 13.6 | 9.1 |
| Conservation of resources | 7.0 | 6.1 | 5.7 | 5.7 | 6.7 | 6.2 | *7.8 | 11.5 | 6.5 |
| Nuclear testing/weapons | 8.8 | 8.2 | 6.3 | 4.8 | 6.9 | 6.0 | *7.6 | 9.0 | 7.6 |
| Use of pesticides | 5.1 | 3.7 | 4.0 | 3.0 | 3.2 | 5.7 | *5.1 | 4.0 | 4.2 |
| Uranium mining/use/radioactive materials | 5.6 | 4.6 | 3.9 | 5.6 | 5.4 | 4.5 | 12.1 | 7.6 | 5.1 |
| Urban development/overpopulation | 6.8 | 5.0 | 7.0 | 3.5 | 5.3 | 3.1 | *7.8 | 8.7 | 5.9 |
| Other pollution | 10.3 | 7.0 | 7.9 | 11.7 | 7.9 | 7.0 | *8.6 | 8.7 | 8.8 |
| Other | 5.7 | 4.6 | 5.6 | 5.2 | 6.3 | 5.0 | *7.7 | 8.1 | 5.5 |
| No concerns | 31.0 | 27.7 | 32.0 | 25.8 | 28.4 | 41.0 | 33.9 | 24.3 | 29.8 |
| Don't know | 2.5 | 1.8 | 1.3 | 1.6 | 0.8 | *0.8 | — | *0.6 | 1.8 |
| **JUNE 1994** | | | | | | | | | |
| Air pollution | 39.5 | 34.1 | 29.2 | 31.1 | 29.5 | 27.0 | 33.4 | 27.7 | 34.1 |
| Freshwater pollution | 30.2 | 21.8 | 22.5 | 29.5 | 21.1 | 24.6 | 27.0 | 24.9 | 25.5 |
| Ocean pollution | 31.9 | 22.8 | 25.7 | 29.0 | 19.3 | 26.3 | 25.0 | 20.7 | 26.7 |
| Destruction of trees/ecosystems | 26.1 | 22.4 | 29.3 | 24.6 | 26.3 | 21.6 | 34.3 | 26.7 | 25.6 |
| Garbage/rubbish disposal | 16.1 | 16.0 | 14.7 | 18.9 | 13.5 | 12.4 | 13.4 | 16.7 | 15.7 |
| Ozone layer | 15.8 | 18.7 | 15.6 | 20.7 | 17.7 | 13.1 | 20.4 | 18.7 | 17.1 |
| Toxic/chemical waste | 12.0 | 12.2 | 13.3 | 12.0 | 9.5 | 10.2 | 8.9 | 5.9 | 11.9 |
| Greenhouse effect | 9.4 | 9.7 | 6.9 | 10.8 | 6.1 | 6.2 | 8.3 | 9.9 | 8.8 |
| Soil erosion/salinity/land degradation | 10.3 | 8.7 | 9.9 | 10.5 | 7.9 | 8.3 | 13.6 | 10.8 | 9.6 |
| Destruction of animals/wildlife/extinction | 15.8 | 11.2 | 14.9 | 10.8 | 10.4 | 9.9 | 20.3 | 11.6 | 13.3 |
| Conservation of resources | 8.6 | 8.4 | 9.4 | 7.3 | 6.7 | 9.3 | 12.9 | 8.5 | 8.5 |
| Nuclear testing/weapons | 7.8 | 7.1 | 6.4 | 5.1 | 4.3 | 5.9 | 8.0 | 2.6 | 6.7 |
| Use of pesticides | 8.2 | 6.4 | 7.9 | 5.4 | 4.7 | 5.4 | 9.5 | 4.0 | 7.0 |
| Uranium mining/use/radioactive materials | 3.7 | 3.9 | 3.8 | 3.2 | 3.0 | 2.9 | 5.9 | 1.9 | 3.6 |
| Urban development/overpopulation | 9.5 | 6.4 | 8.7 | 5.5 | 6.4 | 6.2 | 11.3 | 7.3 | 7.8 |
| Other pollution | 10.9 | 6.9 | 9.7 | 10.7 | 6.0 | 7.9 | 10.2 | 11.8 | 9.1 |
| Other | 5.5 | 4.8 | 7.0 | 5.5 | 6.5 | 4.1 | 3.0 | 9.1 | 5.7 |
| No concerns | 27.8 | 30.5 | 29.1 | 25.6 | 27.1 | 37.0 | 25.3 | 24.9 | 28.6 |
| Don't know | 2.9 | 2.2 | 2.4 | 1.5 | 2.8 | *1.7 | *2.5 | *0.9 | 2.5 |

ENVIRONMENTAL CONCERNS *continued*

People in non-metropolitan areas were more likely to have no concerns about the environment (32%) than people living in metropolitan areas (28%). Freshwater pollution was the concern nominated by most people living in non-metropolitan areas (25%). Issues which were of more concern to people living in non-metropolitan areas than those living in metropolitan areas included toxic chemicals and hazardous waste, soil erosion and salinity, and the use of pesticides. The proportion of respondents who nominated air pollution as a concern was markedly higher in metropolitan areas than non-metropolitan areas.

**1.6** ENVIRONMENTAL CONCERNS, By Area—1999(a)

| | *Metropolitan areas* | *Non-metropolitan areas* | *Aust.* |
|---|---|---|---|
| | % | % | % |
| Air pollution | 33.9 | 20.0 | 29.1 |
| Freshwater pollution | 24.4 | 24.8 | 24.6 |
| Ocean/sea pollution | 23.2 | 21.0 | 22.4 |
| Destruction of trees/ecosystems | 22.0 | 19.6 | 21.1 |
| Garbage/rubbish disposal | 15.1 | 12.1 | 14.1 |
| Ozone layer | 13.4 | 10.1 | 12.3 |
| Toxic chemicals/hazardous waste | 10.7 | 11.5 | 11.0 |
| Soil erosion/salinity | 8.5 | 13.5 | 10.2 |
| Greenhouse effect | 9.6 | 7.2 | 8.7 |
| Destruction of animals/wildlife | 8.0 | 7.4 | 7.8 |
| Conservation/preservation of resources | 7.2 | 7.1 | 7.1 |
| Irresponsible urban development | 6.6 | 5.2 | 6.1 |
| Use of pesticides | 4.9 | 6.9 | 5.6 |
| Uranium mining/radioactive materials | 5.9 | 5.0 | 5.6 |
| Nuclear testing/weapons | 5.2 | 4.9 | 5.1 |
| Overpopulation | 4.5 | 3.2 | 4.1 |
| Other pollution | 4.2 | 3.3 | 3.9 |
| Other | 3.4 | 3.7 | 3.5 |
| Don't know | 2.2 | 2.5 | 2.3 |
| No concerns | 28.2 | 32.2 | 29.6 |

(a) Refer to Explanatory Notes, point 6.

ENVIRONMENTAL CONCERNS *continued*

People aged between 25 and 54 years registered higher levels of concern for environmental problems than the other groups, particularly when compared to the 65 and over group. There has been a drop in concern amongst the younger age groups, while the level of concern by older people has dropped slightly for those aged 55–64 years, and risen for those aged 65 years and over since the 1998 survey.

**1.7** PERSONS CONCERNED ABOUT ENVIRONMENTAL PROBLEMS, By Age

| | AGE GROUP (YEARS) | | | | | | |
|---|---|---|---|---|---|---|---|
| | *18–24* | *25–34* | *35–44* | *45–54* | *55–64* | *65 and over* | *Total* |
| | % | % | % | % | % | % | % |
| | 1999(a) | | | | | | |
| Yes | 67.8 | 72.4 | 72.8 | 73.4 | 67.1 | 54.4 | 68.7 |
| No | 30.2 | 25.7 | 26.0 | 25.8 | 31.6 | 42.1 | 29.6 |
| Don't know | 2.1 | 1.9 | 1.2 | *0.8 | *1.3 | 3.4 | 1.7 |
| | 1998 | | | | | | |
| Yes | 74.1 | 76.0 | 77.4 | 73.9 | 67.4 | 52.4 | 71.1 |
| No | 24.7 | 22.8 | 21.0 | 24.4 | 30.6 | 43.3 | 26.9 |
| Don't know | 1.2 | 1.2 | 1.6 | 1.8 | 2.0 | 4.3 | 1.9 |
| | APRIL 1996 | | | | | | |
| Yes | 72.7 | 72.1 | 73.2 | 70.9 | 64.2 | 52.9 | 68.4 |
| No | 25.4 | 26.1 | 25.4 | 27.8 | 33.9 | 44.7 | 29.8 |
| Don't know | 2.0 | 1.8 | 1.5 | 1.3 | 1.9 | 2.4 | 1.8 |
| | JUNE 1994 | | | | | | |
| Yes | 73.6 | 73.4 | 75.8 | 71.6 | 63.0 | 49.7 | 68.9 |
| No | 24.6 | 24.2 | 22.4 | 26.8 | 34.1 | 45.6 | 28.6 |
| Don't know | 1.9 | 2.3 | 1.8 | 1.6 | 2.9 | 4.8 | 2.5 |
| | MAY 1992 | | | | | | |
| Yes | 78.9 | 79.8 | 79.3 | 76.2 | 68.7 | 59.3 | 74.8 |
| No | 18.8 | 18.2 | 19.2 | 21.9 | 28.9 | 37.0 | 23.0 |
| Don't know | 2.3 | 2.1 | 1.5 | 1.8 | 2.4 | 3.7 | 2.2 |

(a) Refer to Explanatory Notes, point 6.

ENVIRONMENTAL CONCERNS *continued*

In general, younger people had more concern for longer term environmental problems than those in the older age groups. Of people aged between 18 and 24 years, 16% were concerned about the ozone layer (a drop from 21% in 1998), compared with 6% of people aged 65 years and over (5% in 1998). Similarly, 11% of 18–24 year olds were concerned about the greenhouse effect (compared with 16% in 1998), compared with 5% of people aged 65 and over. People who had no concerns were highest for the older age groups, with 42% of those aged 65 and over having no environmental concerns, compared with 26% of 25–54 year olds.

**1.8** ENVIRONMENTAL CONCERNS, By Age

| | AGE GROUP (YEARS) | | | | | | |
|---|---|---|---|---|---|---|---|
| | *18–24* | *25–34* | *35–44* | *45–54* | *55–64* | *65 and over* | *Total* |
| | % | % | % | % | % | % | % |
| | 1999(a) | | | | | | |
| Air pollution | 32.0 | 30.5 | 32.2 | 32.6 | 24.8 | 19.4 | 29.1 |
| Freshwater pollution | 20.4 | 24.1 | 29.3 | 30.1 | 23.5 | 16.4 | 24.6 |
| Ocean/sea pollution | 26.8 | 25.0 | 25.8 | 24.1 | 16.5 | 13.1 | 22.4 |
| Destruction of trees/ecosystems | 19.6 | 22.7 | 21.4 | 23.4 | 22.6 | 16.2 | 21.1 |
| Garbage/rubbish disposal | 17.9 | 16.2 | 14.4 | 14.9 | 11.3 | 8.6 | 14.1 |
| Ozone layer | 15.7 | 17.0 | 12.1 | 12.5 | 7.7 | 6.4 | 12.3 |
| Toxic chemicals/hazardous waste | 10.1 | 14.2 | 12.7 | 11.8 | 9.6 | 5.2 | 11.0 |
| Soil erosion/salinity | 7.8 | 10.3 | 11.0 | 13.3 | 10.1 | 7.5 | 10.2 |
| Greenhouse effect | 11.3 | 9.9 | 9.4 | 9.7 | 6.9 | 4.5 | 8.7 |
| Destruction of animals/wildlife | 9.3 | 9.5 | 7.5 | 8.2 | 6.9 | 4.8 | 7.8 |
| Conservation/preservation of resources | 6.6 | 7.9 | 7.9 | 8.4 | 6.9 | 4.2 | 7.1 |
| Irresponsible urban development | 4.2 | 7.4 | 6.1 | 7.6 | 5.7 | 4.8 | 6.1 |
| Use of pesticides | 4.0 | 6.6 | 6.8 | 6.7 | 5.5 | 3.0 | 5.6 |
| Uranium mining/radioactive materials | 7.1 | 7.4 | 5.5 | 5.9 | 4.2 | 2.8 | 5.6 |
| Nuclear testing/weapons | 5.8 | 6.1 | 5.2 | 5.6 | 4.8 | 2.6 | 5.1 |
| Overpopulation | 4.3 | 5.1 | 4.0 | 4.5 | 3.1 | 2.9 | 4.1 |
| Other pollution | 3.9 | 3.4 | 4.3 | 4.2 | 4.5 | 2.9 | 3.9 |
| Other | 2.5 | 3.6 | 3.7 | 4.0 | 4.1 | 3.0 | 3.5 |
| Don't know | 2.9 | 2.3 | 1.7 | 1.1 | 2.1 | 4.1 | 2.3 |
| No concerns | 30.2 | 25.7 | 26.0 | 25.8 | 31.6 | 42.1 | 29.6 |
| | 1998 | | | | | | |
| Air pollution | 35.1 | 37.5 | 36.0 | 34.2 | 27.9 | 18.3 | 32.2 |
| Freshwater pollution | 26.4 | 29.6 | 31.4 | 28.3 | 26.7 | 18.4 | 27.3 |
| Ocean/sea pollution | 30.2 | 29.7 | 26.9 | 23.5 | 17.7 | 10.9 | 23.8 |
| Destruction of trees/ecosystems | 23.7 | 25.7 | 24.5 | 20.3 | 18.9 | 15.0 | 21.8 |
| Garbage/rubbish disposal | 13.8 | 20.0 | 17.4 | 14.0 | 9.3 | 8.5 | 14.6 |
| Ozone layer | 20.5 | 18.6 | 14.0 | 11.3 | 8.9 | 4.7 | 13.4 |
| Toxic chemicals/hazardous waste | 11.3 | 14.3 | 13.5 | 12.8 | 7.4 | 5.5 | 11.3 |
| Greenhouse effect | 15.8 | 12.9 | 12.9 | 10.5 | 6.9 | 4.6 | 10.9 |
| Soil erosion/salinity | 8.1 | 10.5 | 11.9 | 11.9 | 9.3 | 5.4 | 9.8 |
| Destruction of animals/wildlife | 13.0 | 11.6 | 11.3 | 9.2 | 6.4 | 4.5 | 9.6 |
| Conservation/preservation of resources | 8.8 | 9.7 | 7.2 | 7.8 | 4.9 | 4.0 | 7.3 |
| Nuclear testing/weapons | 9.6 | 8.7 | 7.6 | 7.3 | 4.5 | 3.3 | 7.0 |
| Use of pesticides | 5.2 | 7.0 | 7.5 | 6.5 | 5.5 | 2.9 | 6.0 |
| Uranium mining/radioactive materials | 7.6 | 9.0 | 6.1 | 5.7 | 3.5 | 1.8 | 5.9 |
| Irresponsible urban development | 4.0 | 5.7 | 7.7 | 6.1 | 5.4 | 3.7 | 5.6 |
| Other pollution | 4.7 | 5.4 | 5.1 | 5.4 | 3.8 | 2.4 | 4.6 |
| Other | 2.0 | 3.4 | 3.7 | 6.1 | 3.8 | 3.4 | 3.8 |
| Overpopulation | 3.8 | 4.3 | 3.8 | 4.2 | 3.4 | 2.2 | 3.7 |
| Don't know | 1.6 | 2.0 | 2.4 | 2.5 | 3.2 | 5.5 | 2.8 |
| No concerns | 24.7 | 22.8 | 21.0 | 24.4 | 30.6 | 43.3 | 26.9 |

(a) Refer to Explanatory Notes, point 6.

## GENDER DIFFERENCES

For many of the concerns surveyed, there were no great differences between the sexes. However, the most marked differences were that women were more likely to nominate garbage and rubbish disposal as a concern than men (17% against 11%), while men nominated soil erosion and salinity as a concern more frequently than women (12% compared with 9%).

**1.9** ENVIRONMENTAL CONCERNS, By Sex

| | *Males* | *Females* | *Total* |
|---|---|---|---|
| | % | % | % |
| **1999(a)** | | | |
| Air pollution | 27.8 | 30.3 | 29.1 |
| Freshwater pollution | 25.1 | 24.1 | 24.6 |
| Ocean/sea pollution | 22.6 | 22.3 | 22.4 |
| Destruction of trees/ecosystems | 21.3 | 21.0 | 21.1 |
| Garbage/rubbish disposal | 11.1 | 17.0 | 14.1 |
| Ozone layer | 11.1 | 13.4 | 12.3 |
| Toxic chemicals/hazardous waste | 10.2 | 11.7 | 11.0 |
| Soil erosion/salinity | 11.7 | 8.8 | 10.2 |
| Greenhouse effect | 9.2 | 8.4 | 8.7 |
| Destruction of animals/wildlife | 6.9 | 8.6 | 7.8 |
| Conservation/preservation of resources | 6.7 | 7.6 | 7.1 |
| Irresponsible urban development | 5.7 | 6.6 | 6.1 |
| Use of pesticides | 4.9 | 6.3 | 5.6 |
| Uranium mining/radioactive materials | 5.0 | 6.2 | 5.6 |
| Nuclear testing/weapons | 4.4 | 5.8 | 5.1 |
| Overpopulation | 4.0 | 4.2 | 4.1 |
| Other pollution | 3.6 | 4.1 | 3.9 |
| Other | 3.0 | 4.0 | 3.5 |
| Don't know | 1.9 | 2.6 | 2.3 |
| No concerns | 29.8 | 29.4 | 29.6 |
| **1998** | | | |
| Air pollution | 32.1 | 32.4 | 32.2 |
| Freshwater pollution | 27.8 | 26.8 | 27.3 |
| Ocean/sea pollution | 25.0 | 22.7 | 23.8 |
| Destruction of trees/ecosystems | 22.2 | 21.4 | 21.8 |
| Garbage/rubbish disposal | 11.9 | 17.2 | 14.6 |
| Ozone layer | 12.7 | 14.0 | 13.4 |
| Toxic chemicals/hazardous waste | 11.9 | 10.8 | 11.3 |
| Greenhouse effect | 11.1 | 10.7 | 10.9 |
| Soil erosion/salinity | 11.6 | 8.0 | 9.8 |
| Destruction of animals/wildlife | 9.4 | 9.8 | 9.6 |
| Conservation/preservation of resources | 7.1 | 7.5 | 7.3 |
| Nuclear testing/weapons | 6.9 | 7.2 | 7.0 |
| Use of pesticides | 5.6 | 6.3 | 6.0 |
| Uranium mining/radioactive materials | 6.1 | 5.7 | 5.9 |
| Irresponsible urban development | 5.7 | 5.6 | 5.6 |
| Other pollution | 4.3 | 4.9 | 4.6 |
| Other | 3.9 | 3.8 | 3.8 |
| Overpopulation | 4.2 | 3.2 | 3.7 |
| Don't know | 2.1 | 3.5 | 2.8 |
| No concerns | 26.1 | 27.8 | 26.9 |

(a) Refer to Explanatory Notes, point 6.

## PERCEIVED QUALITY OF THE ENVIRONMENT

The majority of people (43%) stated that they believed the quality of the environment had declined over the last 10 years, a slight decrease from 1998 (46%). Just over a quarter (27%) thought that the environment had stayed much the same, while 25% stated that the condition of the environment had improved, a slight rise when compared with 1998. Western Australians had the highest proportion of people who believed the state of the environment had declined (53%, compared with 51% in 1998), while Victorians rated highest for those who thought the environment had improved (28%). People in Tasmania were the most likely to think that the quality of the environment had stayed much the same in the last 10 years (32%).

**1.10** QUALITY OF THE ENVIRONMENT IN THE LAST 10 YEARS

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | % | % | % | % | % | % | % | % | % |
| 1999(b) | | | | | | | | | |
| Declined | 42.8 | 40.7 | 41.7 | 43.2 | 52.6 | 37.8 | 44.4 | 43.6 | 42.9 |
| Improved | 27.2 | 27.6 | 24.6 | 21.9 | 16.4 | 26.4 | *20.8 | 25.2 | 25.3 |
| Stayed much the same | 25.3 | 26.9 | 28.8 | 30.0 | 26.8 | 31.6 | 30.6 | 27.2 | 27.1 |
| Don't know/not interested | 4.7 | 4.8 | 4.9 | 4.8 | 4.2 | *4.3 | *4.1 | *4.1 | 4.7 |
| 1998 | | | | | | | | | |
| Declined | 45.9 | 44.6 | 44.8 | 44.8 | 50.9 | 42.5 | 48.4 | 48.2 | 45.7 |
| Improved | 23.6 | 24.8 | 25.6 | 23.1 | 18.2 | 24.7 | 18.6 | 22.5 | 23.7 |
| Stayed much the same | 25.7 | 26.2 | 25.3 | 28.1 | 26.2 | 28.9 | 30.1 | 26.2 | 26.1 |
| Don't know/not interested | 4.8 | 4.5 | 4.3 | 4.0 | 4.8 | 3.9 | 2.8 | 3.1 | 4.5 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Refer to Explanatory Notes, point 6.

PERCEIVED QUALITY OF THE ENVIRONMENT *continued*

While the largest proportions of all age groups believed that the quality of the environment had declined, people in the younger age groups rated higher for this category than older people. Of those aged 18–24 years, 52% believed the environment had declined (compared with 54% in 1998), compared with 39% of those aged 55–64 years and more (44% in 1998). People in the 55–64 age group were also more likely to state that they believed that the condition of the environment had improved, compared to people in the 18–24 years age groups.

**1.11** QUALITY OF THE ENVIRONMENT IN THE LAST 10 YEARS, By Age

| | AGE GROUP (YEARS) | | | | | | |
|---|---|---|---|---|---|---|---|
| | *18–24* | *25–34* | *35–44* | *45–54* | *55–64* | *65 and over* | *Total* |
| | % | % | % | % | % | % | % |
| | 1999(a) | | | | | | |
| Declined | 51.7 | 44.0 | 42.8 | 40.1 | 38.6 | 41.0 | 42.9 |
| Improved | 16.9 | 22.4 | 26.5 | 30.4 | 31.1 | 24.1 | 25.3 |
| Stayed much the same | 25.9 | 27.8 | 26.9 | 26.1 | 27.0 | 28.9 | 27.1 |
| Don't know/not interested | 5.6 | 5.8 | 3.9 | 3.5 | 3.4 | 6.0 | 4.7 |
| | 1998 | | | | | | |
| Declined | 53.5 | 45.0 | 45.9 | 44.5 | 44.1 | 42.5 | 45.7 |
| Improved | 17.2 | 20.8 | 25.3 | 29.5 | 26.2 | 22.3 | 23.7 |
| Stayed much the same | 26.2 | 28.9 | 25.5 | 22.9 | 26.2 | 26.7 | 26.1 |
| Don't know/not interested | 3.1 | 5.4 | 3.4 | 3.1 | 3.4 | 8.5 | 4.5 |

(a) Refer to Explanatory Notes, point 6.

ENVIRONMENT CONCERNS POPULATION TABLE

The following table provides a comparison of those who nominated environmental issues as their main concern and all those who reported environmental concerns. The patterns and overall numbers are quite different. The destruction of trees/ecosystems replaces air pollution as the problem of most concern (43%). There is only a small variation between the proportions of the top four concerns. These are the same top four concerns as those for the entire Australian population, although their order has changed.

**1.12** ENVIRONMENTAL CONCERNS(a)

| | *Environment the main concern of respondents* | | *All respondents with environmental concerns* | |
|---|---|---|---|---|
| | no. | % | no. | % |
| | 1999(b) | | | |
| Destruction of trees/ecosystems | 529 737 | 43.2 | 2 869 466 | 21.1 |
| Freshwater pollution | 508 060 | 41.4 | 3 331 570 | 24.6 |
| Ocean/sea pollution | 504 044 | 41.1 | 3 045 054 | 22.4 |
| Air pollution | 503 707 | 41.1 | 3 943 404 | 29.1 |
| Garbage/rubbish disposal | 272 490 | 22.2 | 1 908 438 | 14.1 |
| Soil erosion/salinity | 263 217 | 21.5 | 1 385 686 | 10.2 |
| Destruction of animals/wildlife | 231 526 | 18.9 | 1 055 835 | 7.8 |
| Ozone layer | 226 101 | 18.4 | 1 663 901 | 12.3 |
| Toxic chemicals/hazardous waste | 207 605 | 16.9 | 1 490 626 | 11.0 |
| Greenhouse effect | 194 109 | 15.8 | 1 186 979 | 8.7 |
| Conservation/preservation of resources | 177 451 | 14.5 | 969 555 | 7.1 |
| Uranium mining/radioactive materials | 152 528 | 12.4 | 760 009 | 5.6 |
| Irresponsible urban development | 141 513 | 11.5 | 834 303 | 6.1 |
| Use of pesticides | 127 820 | 10.4 | 763 679 | 5.6 |
| Nuclear testing/weapons | 101 601 | 8.3 | 692 936 | 5.1 |
| Other | 86 194 | 7.0 | 475 491 | 3.5 |
| Other pollution | 84 269 | 6.9 | 525 571 | 3.9 |
| Overpopulation | 82 498 | 6.7 | 553 221 | 4.1 |
| Don't know | 9 186 | 0.7 | 310 189 | 2.3 |

(a) Totals do not equal the sum of items in each column because more than one item may be specified.

(b) Refer to Explanatory Notes, point 6.

# CHAPTER 2 ENERGY CONSERVATION MEASURES .....

## MAIN FINDINGS

- Just over half of Australian households reported that their dwellings had some form of insulation. Insulation creates a thermal barrier which reduces the rate or transfer of heat from, and into, a house. The use of insulation can reduce the amount of energy used to heat or cool a dwelling, as well as lower power costs.
- Achieving a more comfortable temperature was the main reason for insulation having been installed (87% of households).
- Cost was the main factor discouraging people from installing insulation.
- The principal product used to insulate the roof and ceiling of dwellings was fibreglass, wool or poly batts (62% of households), followed by loose fill using cellulose fibre. The main wall insulation was also batts, followed by sisalation/reflective foil.
- The survey found that the main inhibitor to obtaining direct winter sunlight was the design of the dwelling. Dwelling design can significantly affect the amount of sunlight entering a home. By siting the rooms that are principally used by the household (eg living areas such as lounge/dining rooms, and bedrooms) so that they face north, sunlight in winter can be employed to heat the dwelling.
- The rooms which received the most winter sunlight were the lounge, living and bedrooms.
- The principal material of the outside walls for dwellings in Australia was brick veneer (41% of dwellings), followed by double brick (with 27%). Energy use can be affected by the type of material used due to their different heat transfer properties.
- Using fluorescent lights can reduce energy consumption, with many types using around 80% less power than conventional incandescent lamps for the same light output. The survey found that around 60% of Australian households had rooms lit by these lights. The highest percentage of households not using these lights occurred in Tasmania (51%), followed by the Australian Capital Territory and South Australia. The greatest use, with at least one room using them, occurred in the Northern Territory (36%), which also had the lowest proportion of dwellings *not* using *any* fluorescent lights (15%).
- Outside awnings and/or shutters were the principal form of window treatment.

## DWELLING CONSTRUCTION

The principal material of the outside walls for dwellings in Australia was brick veneer (41% of dwellings), followed by double brick (with 27%). The Australian Capital Territory had the highest proportion of dwellings built using brick veneer (72%), and Western Australia the fewest (9%). However, Western Australia had the highest proportion of dwellings using double brick (76%). Tasmania recorded the highest proportion of dwellings built using timber (32%), while the Northern Territory had the highest number of dwellings built using concrete or besser block walls (40%).

### **2.1** DWELLING MATERIAL, Outside Walls

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Brick veneer | 911.1 | 1 014.3 | 546.2 | 201.7 | 63.0 | 72.1 | *5.5 | 85.3 | 2 899.2 |
| Double brick | 732.0 | 230.9 | 97.7 | 271.9 | 540.6 | 32.7 | 13.0 | 24.9 | 1 943.6 |
| Stone | *5.0 | *4.1 | *2.9 | 47.3 | *3.7 | *2.1 | — | — | 65.1 |
| Timber | 251.2 | 324.2 | 376.9 | 15.2 | 22.6 | 59.8 | *0.4 | *1.9 | 1 052.3 |
| Fibro cement | 310.4 | 61.3 | 126.3 | 25.6 | 61.2 | *3.8 | *4.4 | *1.3 | 594.3 |
| Concrete/besser block | 27.3 | 35.1 | 103.0 | 25.0 | *6.5 | *7.3 | 20.9 | *2.7 | 227.8 |
| Steel/aluminium | 67.7 | 22.4 | 33.3 | *4.6 | *3.1 | *3.6 | *6.5 | *0.6 | 141.7 |
| Aerated concrete | *2.8 | *3.6 | *4.4 | — | *0.7 | *0.2 | *0.2 | *0.2 | 12.2 |
| Other | 68.6 | 36.3 | 34.8 | *9.2 | 11.8 | *4.8 | *0.9 | *0.4 | 166.8 |
| Don't know | *9.4 | *8.4 | *6.3 | *5.1 | *2.0 | — | *0.4 | *0.6 | 32.1 |
| **All dwellings** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| | | | | | PROPORTION (%) | | | | |
| Brick veneer | 38.2 | 58.3 | 41.0 | 33.3 | 8.8 | 38.7 | *10.6 | 72.3 | 40.6 |
| Double brick | 30.7 | 13.3 | 7.3 | 44.9 | 75.6 | 17.6 | 24.9 | 21.1 | 27.2 |
| Stone | *0.2 | *0.2 | *0.2 | 7.8 | *0.5 | *1.1 | — | — | 0.9 |
| Timber | 10.5 | 18.6 | 28.3 | 2.5 | 3.2 | 32.1 | *0.7 | *1.6 | 14.7 |
| Fibro cement | 13.0 | 3.5 | 9.5 | 4.2 | 8.6 | *2.0 | *8.4 | *1.1 | 8.3 |
| Concrete/besser block | 1.1 | 2.0 | 7.7 | 4.1 | *0.9 | *3.9 | 40.0 | *2.3 | 3.2 |
| Steel/aluminium | 2.8 | 1.3 | 2.5 | *0.8 | *0.4 | *1.9 | *12.4 | *0.5 | 2.0 |
| Aerated concrete | *0.1 | *0.2 | *0.3 | — | *0.1 | *0.1 | *0.4 | *0.2 | 0.2 |
| Other | 2.9 | 2.1 | 2.6 | *1.5 | 1.7 | *2.6 | *1.8 | *0.3 | 2.3 |
| Don't know | *0.4 | *0.5 | *0.5 | *0.8 | *0.3 | — | *0.7 | *0.5 | 0.5 |

(a) Northern Territory data refers to mainly urban areas only.

## FLUORESCENT LIGHTS

Around 60% of Australian households had rooms lit by fluorescent lights. The highest percentage of there being no rooms in the dwelling being lit with these types of lights occurred in Tasmania (51%), followed by the Australian Capital Territory and South Australia (both 45%). The greatest use of fluorescent lamps lighting at least one room in the dwelling occurred in the Northern Territory (36%), which also had the lowest number of dwellings not using any fluorescent lights (with 15% of dwellings).

### **2.2** ROOMS LIT PRIMARILY BY FLUORESCENT LIGHTS

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| None | 1 033.8 | 765.1 | 318.9 | 270.5 | 294.3 | 95.0 | *7.6 | 53.2 | 2 838.4 |
| One | 629.1 | 570.2 | 342.9 | 190.4 | 242.8 | 49.2 | 19.0 | 31.9 | 2 075.4 |
| Two | 390.7 | 227.4 | 270.0 | 78.9 | 106.3 | 21.6 | *8.3 | 17.7 | 1 120.7 |
| Three | 172.1 | 85.2 | 145.7 | 31.6 | 36.0 | 11.2 | *6.0 | *7.3 | 495.1 |
| Four | 68.3 | 40.1 | 84.4 | 15.4 | 15.9 | *3.6 | *3.3 | *3.7 | 234.7 |
| More than four | 91.4 | 52.7 | 170.0 | 18.7 | 20.0 | *5.8 | *8.0 | *4.2 | 370.8 |
| **Total** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| | | | | | PROPORTION (%) | | | | |
| None | 43.3 | 44.0 | 23.9 | 44.7 | 41.1 | 51.0 | *14.6 | 45.1 | 39.8 |
| One | 26.4 | 32.8 | 25.7 | 31.5 | 33.9 | 26.4 | 36.3 | 27.0 | 29.1 |
| Two | 16.4 | 13.1 | 20.3 | 13.0 | 14.9 | 11.6 | *15.9 | 15.0 | 15.7 |
| Three | 7.2 | 4.9 | 10.9 | 5.2 | 5.0 | 6.0 | *11.4 | *6.2 | 6.9 |
| Four | 2.9 | 2.3 | 6.3 | 2.5 | 2.2 | *1.9 | *6.3 | *3.1 | 3.3 |
| More than four | 3.8 | 3.0 | 12.8 | 3.1 | 2.8 | *3.1 | *15.4 | *3.6 | 5.2 |

(a) Northern Territory data refers to mainly urban areas only.

## INSULATION

Just over half of Australian households reported that their dwellings had some form of insulation. Of respondents, 46% stated that their dwelling had no insulation. The warmer climates of Queensland and the Northern Territory reported the lowest proportion of dwellings having any roof or ceiling insulation (31% and 44%, respectively). There was a slight increase in the proportion of dwellings reported as not having insulation for South Australia and the Australian Capital Territory between 1994 and 1999.

Separate houses had the highest proportion of wall insulation (17%), and also rated lowest as the type of dwelling which was not insulated (38%).

### **2.3** INSULATION INSTALLED

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | MARCH 1999 | | | | |
| **Number ('000)** | | | | | | | | | |
| Roof/ceiling | 1 104.6 | 1 225.4 | 410.2 | 422.3 | 407.0 | 116.0 | 23.0 | 88.4 | 3 796.9 |
| Walls | 272.6 | 391.0 | 114.7 | 117.3 | 31.6 | 31.8 | *3.8 | 35.6 | 998.3 |
| Floor | *7.1 | *5.4 | *4.3 | *0.7 | *0.9 | *2.1 | *0.2 | *1.0 | 21.7 |
| Other | *1.5 | — | *2.1 | *1.0 | — | *0.2 | — | — | *4.8 |
| Dwelling not insulated | 1 250.8 | 499.1 | 892.3 | 176.5 | 305.6 | 67.0 | 28.8 | 28.5 | 3 248.6 |
| **Total dwellings(b)** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| **Proportion (%)** | | | | | | | | | |
| Roof/ceiling | 46.3 | 70.4 | 30.8 | 69.7 | 56.9 | 62.3 | 44.0 | 74.9 | 53.2 |
| Walls | 11.4 | 22.5 | 8.6 | 19.4 | 4.4 | 17.1 | *7.2 | 30.2 | 14.0 |
| Floor | *0.3 | *0.3 | *0.3 | *0.1 | *0.1 | *1.1 | *0.4 | *0.9 | 0.3 |
| Other | *0.1 | — | *0.2 | *0.2 | — | *0.1 | — | — | *0.1 |
| Dwelling not insulated | 52.4 | 28.7 | 67.0 | 29.2 | 42.7 | 35.9 | 55.2 | 24.2 | 45.5 |
| | | | | | JUNE 1994 | | | | |
| **Proportion (%)** | | | | | | | | | |
| Roof/ceiling | 43.0 | 68.5 | 26.1 | 70.3 | 51.5 | 60.8 | 43.1 | 77.1 | 50.7 |
| Walls | 11.6 | 19.1 | 7.3 | 17.7 | 3.3 | 16.6 | 10.5 | 24.9 | 12.8 |
| Floor | 0.3 | 0.5 | 0.2 | 0.2 | — | 0.6 | 0.8 | 1.0 | 0.3 |
| Other | 0.1 | 0.1 | 0.1 | 0.3 | 0.3 | 0.2 | — | 0.3 | 0.2 |
| Dwelling not insulated | 55.5 | 30.5 | 71.5 | 27.8 | 48.0 | 37.3 | 56.1 | 20.5 | 47.9 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Totals do not equal the sum of items in each column because more than one location may be specified.

INSULATION

## 2.4 INSULATION INSTALLED, By Type Of Dwelling

| | *Separate house* | *Semi-detached/terrace house* | *Flat/apartment* | *Other* | *Total* |
|---|---|---|---|---|---|
| | | | NUMBER ('000) | | |
| Roof/ceiling | 3 425.9 | 239.6 | 112.6 | 18.8 | 3 796.9 |
| Walls | 938.5 | 31.5 | 19.2 | *9.1 | 998.3 |
| Floor | 19.9 | — | *1.8 | — | 21.7 |
| Other | *3.4 | *0.9 | *0.5 | — | *4.8 |
| Dwelling not insulated | 2 121.0 | 407.4 | 684.7 | 35.6 | 3 248.6 |
| **Total(a)** | **5 623.4** | **651.2** | **803.5** | **57.0** | **7 135.2** |
| | | | PROPORTION (%) | | |
| Roof/ceiling | 60.9 | 36.8 | 14.0 | 33.0 | 53.2 |
| Walls | 16.7 | 4.8 | 2.4 | *16.0 | 14.0 |
| Floor | 0.4 | — | *0.2 | — | 0.3 |
| Other | *0.1 | *0.1 | *0.1 | — | *0.1 |
| Dwelling not insulated | 37.7 | 62.6 | 85.2 | 62.4 | 45.5 |

(a) Totals do not equal the sum of items in each column because more than one location may be specified.

Achieving a more comfortable temperature was the main reason for insulation having been installed (87% of households). Saving on energy bills and reducing energy use were reasons given for installing insulation most frequently in colder climates (ie the Australian Capital Territory, Tasmania and Victoria).

## 2.5 DWELLINGS WITH INSULATION, Reason Installed

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | MARCH 1999 | | | | |
| **Number ('000)** | | | | | | | | | |
| Achieve comfort | 568.2 | 523.0 | 248.6 | 183.0 | 202.6 | 53.4 | *4.0 | 31.8 | 1 814.6 |
| Save on energy bills | 44.0 | 86.1 | *8.9 | 17.9 | *7.9 | *7.7 | *0.4 | *5.8 | 178.7 |
| Reduce energy use | 11.2 | 19.5 | *1.7 | *4.9 | *4.8 | *2.5 | — | *2.2 | 46.8 |
| Other | 16.7 | 23.3 | *5.3 | *2.8 | *4.2 | *1.5 | *1.6 | *1.1 | 56.6 |
| **Total dwellings** | **640.2** | **651.9** | **264.5** | **208.5** | **219.5** | **65.1** | ***6.0** | **41.0** | **2 096.7** |
| **Proportion (%)** | | | | | | | | | |
| Achieve comfort | 88.8 | 80.2 | 94.0 | 87.7 | 92.3 | 82.1 | *66.5 | 77.6 | 86.5 |
| Save on energy bills | 6.9 | 13.2 | *3.4 | 8.6 | *3.6 | *11.8 | *6.6 | *14.2 | 8.5 |
| Reduce energy use | 1.8 | 3.0 | *0.6 | *2.3 | *2.2 | *3.8 | — | *5.4 | 2.2 |
| Other | 2.6 | 3.6 | *2.0 | *1.3 | *1.9 | *2.4 | *26.9 | *2.7 | 2.7 |
| | | | | | JUNE 1994 | | | | |
| **Proportion (%)** | | | | | | | | | |
| Achieve comfort | 81.2 | 66.0 | 86.1 | 78.6 | 86.2 | 76.2 | 94.3 | 63.5 | 76.4 |
| Save on energy bills | 12.2 | 25.6 | 4.5 | 16.2 | 10.3 | 17.1 | 3.0 | 21.6 | 16.3 |
| Reduce energy use | 4.1 | 6.7 | 3.8 | 4.1 | 1.6 | 5.9 | — | 12.9 | 4.9 |
| Other | 2.6 | 1.8 | 5.6 | 1.1 | 2.0 | 0.8 | 2.6 | 2.1 | 2.4 |

(a) Northern Territory data refers to mainly urban areas only.

## INSULATION

Cost was the main factor discouraging people from installing insulation, as it was in 1994, although there has been a slight drop in the proportion of households stating this as the reason for not installing insulation in their dwelling. Households stating that they had not installed insulation because they had not got around to doing it were highest in Tasmania, Victoria, South Australia, and the Northern Territory. Insulation not being required due to the climate was highest for the Northern Territory (33% of households). The Australian Capital Territory had the highest proportion of households stating their dwelling was not insulated due to the type of construction (17%).

**2.6** DWELLINGS WITHOUT INSULATION AND OWNER OCCUPIED, Reason Not Installed

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | MARCH 1999 | | | | |
| **Number ('000)** | | | | | | | | | |
| Cost | 110.5 | 30.7 | 134.3 | *9.3 | 37.4 | *8.3 | *1.2 | *0.7 | 332.3 |
| Not interested | 78.1 | 21.0 | 87.1 | *8.0 | 17.3 | *5.6 | *1.8 | *0.2 | 219.1 |
| Not needed (climate) | 92.0 | *9.1 | 74.7 | *4.6 | 13.4 | *3.0 | *2.9 | — | 199.7 |
| Haven't got around to it | 94.8 | 33.2 | 54.8 | 9.5 | 25.1 | *7.8 | *1.9 | *0.5 | 227.7 |
| Dwelling construction | 43.0 | 12.6 | 34.1 | *3.2 | 10.4 | *1.5 | *0.5 | *0.4 | 105.7 |
| Not home owner | *2.5 | *0.7 | *1.1 | *0.6 | — | — | — | — | *4.9 |
| Other | 42.0 | 20.2 | 47.6 | *5.2 | 13.5 | *2.4 | *0.4 | *0.4 | 131.7 |
| **Total dwellings** | **462.9** | **127.4** | **433.8** | **40.5** | **117.2** | **28.6** | ***8.6** | ***2.2** | **1 221.2** |
| **Proportion (%)** | | | | | | | | | |
| Cost | 23.9 | 24.1 | 31.0 | *22.9 | 31.9 | *29.0 | *13.8 | *32.4 | 27.2 |
| Not interested | 16.9 | 16.5 | 20.1 | *19.9 | 14.8 | *19.6 | *21.2 | *6.8 | 17.9 |
| Not needed (climate) | 19.9 | *7.1 | 17.2 | *11.3 | 11.5 | *10.5 | *33.3 | — | 16.3 |
| Haven't got around to it | 20.5 | 26.0 | 12.6 | 23.5 | 21.5 | *27.3 | *21.9 | *23.5 | 18.6 |
| Dwelling construction | 9.3 | 9.9 | 7.9 | *8.0 | 8.9 | *5.2 | *5.4 | *17.4 | 8.7 |
| Not home owner | *0.5 | *0.5 | *0.3 | *1.6 | — | — | — | — | *0.4 |
| Other | 9.1 | 15.9 | 11.0 | *12.8 | 11.5 | *8.4 | *4.4 | *19.9 | 10.8 |
| | | | | | JUNE 1994 | | | | |
| **Proportion (%)** | | | | | | | | | |
| Cost | 30.6 | 37.9 | 31.7 | 30.1 | 42.8 | 37.1 | 16.6 | 42.3 | 33.2 |
| Not interested | 21.6 | 20.0 | 17.6 | 11.0 | 12.7 | 19.2 | 22.4 | 20.2 | 18.8 |
| Not needed (climate) | 13.2 | 4.6 | 29.2 | 17.5 | 14.6 | 5.8 | 29.6 | — | 17.3 |
| Haven't got around to it | 15.2 | 20.7 | 7.7 | 23.6 | 10.4 | 20.0 | 6.6 | 31.3 | 13.4 |
| Dwelling construction | 9.2 | 7.6 | 5.7 | 5.9 | 5.0 | 6.5 | 20.8 | 6.1 | 7.3 |
| Not home owner | 1.5 | 1.0 | 1.8 | 2.2 | 1.5 | 0.9 | — | — | 1.5 |
| Other | 8.7 | 8.2 | 6.3 | 9.8 | 13.1 | 10.5 | 4.1 | — | 8.4 |

(a) Northern Territory data refers to mainly urban areas only.

The principal product used to insulate the roof and ceiling was fibreglass, wool or poly batts (62%), followed by loose fill using cellulose fibre (8%). Respondents in the Northern Territory and Western Australia were the least likely in Australia to have reported having batts (fibreglass, wool or poly) for roof insulation, although this was the most frequently used type of insulation in all States. More than one fifth of respondents in Western Australia reported that they had loose fill–cellulose fibre for insulation. The Northern Territory had the highest proportion of dwellings using sisalation or reflective foil (39%). The main wall insulation was also batts, followed by sisalation and reflective foil.

Of the homes with roof insulation, the majority of homes in all States had more than four rooms insulated.

## **2.7** DWELLINGS WITH ROOF INSULATION, Main Type

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Batts-fibreglass/wool/poly | 770.8 | 745.3 | 220.0 | 276.9 | 197.9 | 73.4 | 10.5 | 62.2 | 2 356.8 |
| Sisalation/reflective foil | 73.0 | 26.0 | 80.0 | *9.0 | 30.0 | *3.9 | *8.9 | *1.5 | 232.2 |
| Loose fill—cellulose fibre | 59.0 | 87.7 | 27.4 | 20.7 | 87.6 | 12.3 | — | *4.3 | 298.9 |
| Loose fill—rock wool | 32.1 | 86.5 | *8.8 | 22.6 | 15.9 | *7.9 | *0.4 | *6.8 | 181.0 |
| Other/unknown loose fill | 32.2 | 68.6 | 14.1 | *9.0 | 25.3 | *4.4 | 0.0 | *2.4 | 155.9 |
| Foam/plastic | *2.9 | 10.9 | *3.7 | *1.5 | *2.5 | *0.4 | *0.4 | — | 22.2 |
| Polystyrene sheets | *3.1 | — | *6.5 | *1.1 | *0.8 | *0.2 | *0.2 | — | 11.8 |
| Insulated cladding | *3.0 | *0.6 | *1.0 | *0.3 | — | — | *0.2 | — | *5.2 |
| Other | 9.8 | *8.3 | *4.5 | *2.0 | *1.6 | *0.6 | *0.6 | *0.9 | 28.2 |
| Don't know | 118.7 | 191.5 | 44.3 | 79.3 | 45.5 | 13.1 | *1.8 | 10.4 | 504.6 |
| **Total dwellings** | **1 104.6** | **1 225.4** | **410.2** | **422.3** | **407.0** | **116.0** | **23.0** | **88.4** | **3 796.9** |
| | | | | | PROPORTION (%) | | | | |
| Batts-fibreglass/wool/poly | 69.8 | 60.8 | 53.6 | 65.6 | 48.6 | 63.2 | 45.5 | 70.3 | 62.1 |
| Sisalation/reflective foil | 6.6 | 2.1 | 19.5 | *2.1 | 7.4 | *3.4 | *38.6 | *1.7 | 6.1 |
| Loose fill—cellulose fibre | 5.3 | 7.2 | 6.7 | 4.9 | 21.5 | 10.6 | — | *4.8 | 7.9 |
| Loose fill—rock wool | 2.9 | 7.1 | *2.2 | 5.4 | 3.9 | *6.8 | *1.8 | *7.6 | 4.8 |
| Other/unknown loose fill | 2.9 | 5.6 | 3.4 | *2.1 | 6.2 | *3.8 | 0.0 | *2.7 | 4.1 |
| Foam/plastic | *0.3 | 0.9 | *0.9 | *0.4 | *0.6 | *0.3 | *1.8 | — | 0.6 |
| Polystyrene sheets | *0.3 | — | *1.6 | *0.3 | *0.2 | *0.2 | *0.8 | — | 0.3 |
| Insulated cladding | *0.3 | — | *0.3 | *0.1 | — | — | *0.9 | — | *0.1 |
| Other | 0.9 | *0.7 | *1.1 | *0.5 | *0.4 | *0.5 | *2.8 | *1.0 | 0.7 |
| Don't know | 10.7 | 15.6 | 10.8 | 18.8 | 11.2 | 11.3 | *7.8 | 11.8 | 13.3 |

(a) Northern Territory data refers to mainly urban areas only.

## **2.8** DWELLINGS WITH ROOF INSULATION, Rooms Covered

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| One | 16.5 | 11.5 | *9.3 | *2.5 | *2.2 | *2.5 | *0.2 | — | 44.6 |
| Two | 32.4 | 16.4 | 10.8 | *6.9 | *8.8 | *3.6 | *0.2 | *1.3 | 80.4 |
| Three | 49.3 | 31.3 | 19.7 | 10.2 | 12.0 | *5.3 | *0.9 | *0.9 | 129.6 |
| Four | 86.2 | 58.8 | 23.9 | 20.9 | 21.5 | *8.6 | *1.6 | *3.5 | 225.2 |
| More than four | 895.6 | 1 074.9 | 340.1 | 372.5 | 345.9 | 89.6 | 19.6 | 78.3 | 3 216.5 |
| Don't know | 24.6 | 32.4 | *6.6 | *9.3 | 16.6 | *6.4 | *0.4 | *4.4 | 100.6 |
| **Total dwellings** | **1 104.6** | **1 225.4** | **410.2** | **422.3** | **407.0** | **116.0** | **23.0** | **88.4** | **3 796.9** |
| | | | | | PROPORTION (%) | | | | |
| One | 1.5 | 0.9 | *2.3 | *0.6 | *0.5 | *2.1 | *0.9 | — | 1.2 |
| Two | 2.9 | 1.3 | 2.6 | *1.6 | *2.2 | *3.1 | *0.9 | *1.4 | 2.1 |
| Three | 4.5 | 2.6 | 4.8 | 2.4 | 2.9 | *4.6 | *3.8 | *1.0 | 3.4 |
| Four | 7.8 | 4.8 | 5.8 | 5.0 | 5.3 | *7.4 | *7.1 | *4.0 | 5.9 |
| More than four | 81.1 | 87.7 | 82.9 | 88.2 | 85.0 | 77.2 | 85.5 | 88.6 | 84.7 |
| Don't know | 2.2 | 2.6 | *1.6 | *2.2 | 4.1 | *5.5 | *1.8 | *5.0 | 2.6 |

(a) Northern Territory data refers to mainly urban areas only.

**2.9** DWELLINGS WITH WALL INSULATION, Main Type

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Batts-fibreglass/wool/poly | 142.4 | 143.2 | 27.1 | 74.5 | 10.3 | 13.3 | *1.2 | 20.0 | 431.9 |
| Sisalation/reflective foil | 78.2 | 163.7 | 64.8 | *9.3 | 12.0 | 13.0 | *1.4 | *3.6 | 346.1 |
| Loose fill—cellulose fibre | *0.7 | *4.7 | *0.5 | *2.1 | *0.8 | *0.6 | — | *0.4 | 9.8 |
| Loose fill—rock wool | *3.7 | *7.8 | *1.1 | *4.1 | — | *0.4 | *0.2 | *1.9 | 19.2 |
| Other/unknown loose fill | — | *4.2 | — | *0.6 | *1.2 | — | — | *0.9 | *6.9 |
| Foam/plastic | *3.6 | *6.1 | *4.0 | *1.1 | *0.8 | *0.2 | *0.2 | *0.6 | 16.5 |
| Polystyrene sheets | *5.0 | *1.7 | *5.2 | *1.7 | *0.9 | *0.4 | — | *0.4 | 15.4 |
| Insulated cladding | *6.1 | *1.8 | *2.2 | *0.6 | — | *0.4 | — | *0.4 | 11.5 |
| Other | *0.7 | *0.6 | *1.6 | *0.3 | — | *0.2 | *0.2 | *0.2 | *3.8 |
| Don't know | 32.2 | 57.2 | *8.2 | 22.9 | *5.6 | *3.4 | *0.6 | *7.1 | 137.1 |
| **Total dwellings** | **272.6** | **391.0** | **114.7** | **117.3** | **31.6** | **31.8** | ***3.8** | **35.6** | **998.3** |
| | | | | | PROPORTION (%) | | | | |
| Batts-fibreglass/wool/poly | 52.2 | 36.6 | 23.6 | 63.5 | 32.6 | 41.7 | *30.6 | 56.3 | 43.3 |
| Sisalation/reflective foil | 28.7 | 41.9 | 56.5 | *7.9 | 38.0 | 41.0 | *37.6 | *10.2 | 34.7 |
| Loose fill—cellulose fibre | *0.3 | *1.2 | *0.4 | *1.8 | *2.6 | *1.9 | — | *1.1 | 1.0 |
| Loose fill—rock wool | *1.3 | *2.0 | *1.0 | *3.5 | — | *1.2 | *5.6 | *5.4 | 1.9 |
| Other/unknown loose fill | — | *1.1 | — | *0.5 | *3.8 | — | — | *2.5 | *0.7 |
| Foam/plastic | *1.3 | *1.6 | *3.5 | *0.9 | *2.5 | *0.6 | *5.1 | *1.8 | 1.7 |
| Polystyrene sheets | *1.8 | *0.4 | *4.6 | *1.5 | *2.9 | *1.2 | — | *1.0 | 1.5 |
| Insulated cladding | *2.2 | *0.4 | *1.9 | *0.6 | — | *1.3 | — | *1.2 | 1.2 |
| Other | *0.3 | *0.1 | *1.4 | *0.3 | — | *0.6 | *5.1 | *0.6 | *0.4 |
| Don't know | 11.8 | 14.6 | *7.1 | 19.5 | *17.6 | *10.6 | *16.0 | *20.0 | 13.7 |

(a) Northern Territory data refers to mainly urban areas only.

## WINDOW TREATMENTS

Approximately half of Australian houses (52%) had one type of window treatment.

Outside awnings and/or shutters were the principal form of window treatment (31% of dwellings), with South Australia and Victoria having the highest proportion of these features (40%). Western Australia and the Northern Territory rated highest for use of tinted glass (16%), while the Australian Capital Territory had the most double glazing (4%). States which had the least amount of window treatments were Tasmania and the Australian Capital Territory, where 63% of respondents reported none of the window treatments specified.

### **2.10** WINDOW TREATMENTS

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Outside awnings/shutters | 653.5 | 693.3 | 404.8 | 241.7 | 172.6 | 14.3 | *8.1 | 35.9 | 2 224.4 |
| Curtains/blinds with boxed pelmets | 541.8 | 574.0 | 328.8 | 158.8 | 170.5 | 52.5 | *6.9 | 28.3 | 1 861.7 |
| Tinted glass/solar guarding | 150.3 | 60.3 | 202.3 | 53.1 | 113.2 | *8.2 | *8.2 | *6.9 | 602.5 |
| Double glazing | 40.8 | 39.0 | 27.5 | 10.8 | 17.9 | *6.1 | *0.4 | *4.5 | 147.0 |
| None of the above | 1 285.1 | 697.2 | 600.0 | 261.6 | 362.5 | 117.8 | 32.8 | 61.0 | 3 418.0 |
| **Total dwellings(b)** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| **Proportion (%)** | | | | | | | | | |
| Outside awnings/shutters | 27.4 | 39.8 | 30.4 | 39.9 | 24.1 | 7.7 | *15.6 | 30.4 | 31.2 |
| Curtains/blinds with boxed pelmets | 22.7 | 33.0 | 24.7 | 26.2 | 23.8 | 28.2 | *13.2 | 24.0 | 26.1 |
| Tinted glass/solar guarding | 6.3 | 3.5 | 15.2 | 8.8 | 15.8 | *4.4 | *15.7 | *5.9 | 8.4 |
| Double glazing | 1.7 | 2.2 | 2.1 | 1.8 | 2.5 | *3.3 | *0.8 | *3.8 | 2.1 |
| None of the above | 53.9 | 40.1 | 45.0 | 43.2 | 50.7 | 63.2 | 62.8 | 51.8 | 47.9 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Outside awnings/shutters | 23.8 | 34.5 | 28.5 | 37.6 | 21.3 | 7.6 | 22.0 | 24.3 | 27.8 |
| Curtains/blinds with boxed pelmets | 17.0 | 26.9 | 13.2 | 21.6 | 17.6 | 25.3 | 10.8 | 20.7 | 19.5 |
| Tinted glass/solar guarding | 5.6 | 3.0 | 13.9 | 8.1 | 13.9 | 2.7 | 17.5 | 4.5 | 7.4 |
| Double glazing | 1.2 | 1.3 | 0.6 | 0.7 | 1.3 | 1.4 | 1.4 | 1.1 | 1.1 |
| None of the above | 61.0 | 48.3 | 54.4 | 46.2 | 56.8 | 67.1 | 57.6 | 58.7 | 55.0 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Totals do not equal the sum of items in each column because more than one item may be specified.

## SOLAR EXPOSURE

The rooms which received the most winter sunlight were the lounge, living and bedrooms. The Northern Territory had the highest proportion of dwellings with windows not receiving winter sunlight (35%), significantly higher than for other States and Territories. Tasmania and the Australian Capital Territory reported the highest numbers of homes which received winter sunlight in the major living areas (lounge/family room, bedrooms, and kitchen/dining rooms).

### **2.11** ROOMS RECEIVING WINTER SUNLIGHT

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | MARCH 1999 | | | | |
| **Number ('000)** | | | | | | | | | |
| Lounge/living/family room | 1 342.8 | 1 107.0 | 633.7 | 324.5 | 354.1 | 144.1 | 16.2 | 83.7 | 4 006.1 |
| Bedroom(s) | 1 319.2 | 935.5 | 745.0 | 307.9 | 369.2 | 121.8 | 20.3 | 75.7 | 3 894.7 |
| Kitchen/dining room | 862.5 | 703.1 | 441.7 | 177.9 | 203.2 | 109.9 | *7.0 | 50.9 | 2 556.2 |
| Laundry/bathroom | 276.3 | 176.5 | 137.9 | 57.3 | 62.2 | 32.7 | *2.4 | 17.0 | 762.3 |
| Other | 140.4 | 74.1 | 97.6 | 17.9 | 34.0 | 11.8 | *0.2 | *7.9 | 384.0 |
| Don't know | *5.7 | *3.7 | *2.7 | *0.7 | *0.8 | *0.8 | — | — | 14.4 |
| No winter sunlight | 218.7 | 109.7 | 128.6 | 84.2 | 93.3 | *3.3 | 18.1 | *5.1 | 661.0 |
| Don't know if winter sunlight | 155.3 | 89.9 | 108.3 | 36.4 | 50.0 | *6.8 | *4.4 | 7.3 | 458.4 |
| **Total dwellings(b)** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| **Proportion (%)** | | | | | | | | | |
| Lounge/living/family room | 56.3 | 63.6 | 47.6 | 53.6 | 49.5 | 77.3 | 31.0 | 70.9 | 56.1 |
| Bedroom(s) | 55.3 | 53.7 | 55.9 | 50.9 | 51.6 | 65.4 | 38.9 | 64.1 | 54.6 |
| Kitchen/dining room | 36.2 | 40.4 | 33.2 | 29.4 | 28.4 | 58.9 | *13.5 | 43.1 | 35.8 |
| Laundry/bathroom | 11.6 | 10.1 | 10.4 | 9.5 | 8.7 | 17.6 | *4.6 | 14.4 | 10.7 |
| Other | 5.9 | 4.3 | 7.3 | 3.0 | 4.8 | 6.3 | *0.4 | *6.7 | 5.4 |
| Don't know | *0.2 | *0.2 | *0.2 | *0.1 | *0.1 | *0.4 | — | — | 0.2 |
| No winter sunlight | 9.2 | 6.3 | 9.7 | 13.9 | 13.0 | *1.8 | 34.7 | *4.3 | 9.3 |
| Don't know if winter sunlight | 6.5 | 5.2 | 8.1 | 6.0 | 7.0 | *3.6 | *8.5 | *6.2 | 6.4 |
| | | | | | JUNE 1994 | | | | |
| **Proportion (%)** | | | | | | | | | |
| Lounge/living/family room | 57.3 | 60.6 | 51.3 | 49.0 | 50.9 | 76.7 | 42.8 | 76.6 | 56.4 |
| Bedroom(s) | 58.6 | 52.7 | 59.2 | 45.1 | 48.6 | 68.9 | 46.6 | 66.6 | 55.4 |
| Kitchen/dining room | 38.1 | 37.4 | 34.5 | 31.4 | 28.1 | 62.9 | 29.2 | 46.2 | 36.5 |
| Laundry/bathroom | 12.5 | 8.2 | 11.2 | 7.4 | 8.3 | 18.3 | 9.2 | 16.1 | 10.5 |
| Other | 4.7 | 2.5 | 5.0 | 3.1 | 3.0 | 4.3 | 1.0 | 2.9 | 3.8 |
| No winter sunlight | 10.1 | 8.8 | 11.0 | 18.2 | 15.9 | 2.7 | 24.6 | 3.8 | 11.0 |
| Don't know | 2.1 | 2.0 | 1.3 | 2.0 | 1.5 | 0.8 | 4.6 | 0.9 | 1.8 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Totals do not equal the sum of items in each column because more than one room may be specified.

SOLAR EXPOSURE *continued*

The main inhibitor to direct sunlight in winter was the design of the dwelling (67%), followed by a verandah (49%) and the household's own trees (34%).

**2.12** WINDOWS NOT RECEIVING DIRECT WINTER SUNLIGHT, Inhibitors

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Slope of the land | 22.4 | *6.0 | 10.6 | *4.4 | *4.1 | *0.4 | *0.2 | *0.7 | 48.9 |
| Design of dwelling | 127.8 | 82.0 | 88.2 | 59.8 | 68.7 | *2.1 | 12.7 | *3.1 | 444.4 |
| Verandah/pergola | 74.7 | 48.8 | 72.0 | 54.2 | 60.5 | *1.0 | 11.6 | *1.5 | 324.3 |
| Own trees/shrubs | 70.0 | 32.6 | 52.3 | 27.1 | 27.6 | *1.0 | 10.9 | *1.0 | 222.4 |
| Neighbour's trees/shrubs | 40.3 | 18.4 | 18.8 | *8.4 | 13.0 | *0.6 | *2.0 | *0.2 | 101.7 |
| Buildings | 65.4 | 19.8 | 16.3 | 10.8 | 11.3 | *0.8 | *1.3 | *0.8 | 126.4 |
| Other | 17.1 | *6.8 | 12.8 | *5.3 | *7.8 | *0.2 | *0.6 | *0.8 | 51.4 |
| None of the above | 100.5 | 41.6 | 50.0 | 31.3 | 34.3 | *1.1 | *6.5 | *2.2 | 267.6 |
| **Total dwellings(b)** | **218.7** | **109.7** | **128.6** | **84.2** | **93.3** | ***3.3** | **18.1** | ***5.1** | **661.0** |
| | | | | | PROPORTION (%) | | | | |
| Slope of the land | 10.2 | *5.5 | 8.2 | *5.2 | *4.4 | *12.3 | *1.3 | *14.7 | 7.4 |
| Design of dwelling | 58.4 | 74.7 | 68.6 | 71.1 | 73.6 | *65.1 | 70.1 | *61.6 | 67.2 |
| Verandah/pergola | 34.2 | 44.5 | 56.0 | 64.4 | 64.9 | *30.0 | 63.9 | *30.0 | 49.1 |
| Own trees/shrubs | 32.0 | 29.7 | 40.7 | 32.2 | 29.6 | *29.5 | 60.0 | *18.8 | 33.7 |
| Neighbour's trees/shrubs | 18.4 | 16.7 | 14.6 | *10.0 | 14.0 | *17.9 | *11.2 | *4.0 | 15.4 |
| Buildings | 29.9 | 18.0 | 12.7 | 12.8 | 12.1 | *23.1 | *7.2 | *15.8 | 19.1 |
| Other | 7.8 | *6.2 | 9.9 | *6.3 | *8.4 | *5.7 | *3.3 | *15.2 | 7.8 |
| None of the above | 46.0 | 37.9 | 38.9 | 37.2 | 36.8 | *34.6 | *35.6 | *43.7 | 40.5 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Totals do not equal the sum of items in each column because more than one reason may be specified.

# CHAPTER 3 ENERGY AND GREENPOWER

## MAIN FINDINGS

- Greenpower is electricity generated from renewable energy sources, such as solar, wind, biomass, wave and hydro power. An amount of renewable electricity equivalent to the consumption is fed into the grid, in the usual way, thereby avoiding that amount of coal derived power and reducing greenhouse gases.
- Around 3% of households surveyed were connected to a greenpower electricity scheme. Of those not connected, the majority (79%) were not aware of any greenpower schemes offered by electricity companies. Just under a quarter of these households (24%) were willing to pay more for electricity produced through a greenpower scheme, although most (56%) were not.
- The principal energy source used for space heating was gas (33%), followed by electricity (28%). When the last survey was conducted in 1994, gas accounted for 32% of households and electricity 30%. Around 20% of dwellings had no form of space heating in 1999.
- The main type of heater used for rooms was non-ducted gas.
- Electricity was the principal energy source used for water heating and cooking.
- The highest proportion of hot water systems using solar energy occurred in the Northern Territory (44%) and Western Australia (20%).
- The main type of heater used for rooms was non-ducted gas.
- Of those households willing to pay more for greenpower, most were prepared to pay between $50 and $150 more per year.

## HEATING

The principal energy source used for space heating was gas (33%), followed by electricity (28%). When the last survey was conducted in 1994, gas accounted for 32% of households and electricity 30%. The use of wood for space heating fell from 18% to 16% between 1994 and 1999. The use of oil has also fallen. Around 20% of households reported that they had no form of space heating.

Use of electricity for space heating was highest in New South Wales (42%) and the Australian Capital Territory (39%), while gas use was highest in Victoria (72%). Use of wood for heating was highest in Tasmania (56%). The Northern Territory and Queensland had the highest proportion of dwellings without heating (90% and 60% respectively).

### 3.1 ROOM HEATING

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | MARCH 1999 | | | | |
| **Number ('000)** | | | | | | | | | |
| Electricity | 1 005.5 | 207.6 | 324.0 | 232.4 | 118.8 | 61.7 | *2.0 | 45.4 | 1 997.3 |
| Gas | 522.0 | 1 245.0 | 35.0 | 195.7 | 279.2 | 11.1 | *1.8 | 59.8 | 2 349.6 |
| Wood | 351.8 | 240.9 | 128.7 | 107.4 | 176.4 | 104.7 | *1.8 | *6.7 | 1 118.3 |
| Coal/coke | *1.5 | *0.6 | — | *0.7 | — | — | — | — | *2.7 |
| Oil | 65.3 | 17.8 | 23.3 | 23.8 | 16.1 | *6.1 | — | *3.9 | 156.3 |
| Solar | — | *0.6 | — | — | — | — | — | *0.2 | *0.8 |
| Other/varies | 14.8 | *5.0 | 16.9 | *2.2 | *4.0 | *0.8 | — | *0.7 | 44.5 |
| Don't know | *0.8 | *3.0 | *3.2 | — | *0.4 | — | — | *0.2 | *7.5 |
| No heating in dwelling | 423.8 | 20.2 | 800.8 | 43.3 | 120.2 | *2.1 | 46.7 | *1.1 | 1 458.1 |
| **Total dwellings** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| **Proportion (%)** | | | | | | | | | |
| Electricity | 42.2 | 11.9 | 24.3 | 38.4 | 16.6 | 33.1 | *3.8 | 38.5 | 28.0 |
| Gas | 21.9 | 71.5 | 2.6 | 32.3 | 39.0 | 6.0 | *3.4 | 50.7 | 32.9 |
| Wood | 14.7 | 13.8 | 9.7 | 17.7 | 24.7 | 56.2 | *3.4 | *5.7 | 15.7 |
| Coal/coke | *0.1 | — | — | *0.1 | — | — | — | — | — |
| Oil | 2.7 | 1.0 | 1.8 | 3.9 | 2.2 | *3.3 | — | *3.3 | 2.2 |
| Solar | — | — | — | — | — | — | — | *0.2 | — |
| Other/varies | 0.6 | *0.3 | 1.3 | *0.4 | *0.6 | *0.4 | — | *0.6 | 0.6 |
| Don't know | — | *0.2 | *0.2 | — | *0.1 | — | — | *0.1 | *0.1 |
| No heating in dwelling | 17.8 | 1.2 | 60.1 | 7.2 | 16.8 | *1.1 | 89.5 | *0.9 | 20.4 |
| | | | | | JUNE 1994 | | | | |
| **Proportion (%)** | | | | | | | | | |
| Electricity | 46.3 | 12.5 | 26.6 | 36.0 | 17.1 | 28.8 | 8.8 | 37.8 | 29.7 |
| Gas | 19.7 | 71.0 | 3.0 | 33.3 | 32.1 | 5.2 | 5.4 | 46.2 | 31.9 |
| Wood | 17.1 | 14.0 | 10.1 | 19.0 | 31.6 | 60.5 | 1.2 | 10.2 | 17.6 |
| Oil | 3.5 | 1.3 | 3.7 | 4.2 | 3.9 | 4.8 | 1.5 | 4.5 | 3.1 |
| Solar | 0.1 | — | — | 0.1 | 0.1 | 0.1 | 0.4 | — | 0.1 |
| Other/varies | 1.7 | 0.6 | 2.0 | 1.4 | 2.0 | 0.5 | 0.9 | 0.9 | 1.4 |
| No heating in dwelling | 11.7 | 0.6 | 54.6 | 5.9 | 13.2 | 0.2 | 81.8 | 0.4 | 16.2 |

(a) Northern Territory data refers to mainly urban areas only.

HEATING

Electricity was the primary energy source for water heating (60% of households), followed by gas (35%). Of the 5% of water heating which used solar power, the majority of these systems (92%) used an electric booster.

Compared with the 1994 survey, the proportion of electrically-heated water has fallen slightly, while use of gas has risen. The use of solar power is virtually unchanged (at 5%).

Tasmania used the most electric systems (97%), followed by Queensland (81%). Gas usage was highest in Victoria (65%), followed by Western Australia (56%). The Northern Territory had the highest proportion of solar hot water heating systems.

## 3.2 WATER HEATING

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | MARCH 1999 | | | | |
| **Number ('000)** | | | | | | | | | |
| Electricity | 1 811.6 | 594.1 | 1 073.2 | 307.3 | 176.9 | 179.8 | 29.0 | 81.9 | 4 253.8 |
| Gas | 497.2 | 1 124.8 | 178.2 | 285.2 | 402.8 | *2.6 | *1.3 | 34.5 | 2 526.7 |
| Solar—electric booster | 59.0 | 10.9 | 74.9 | 15.0 | 132.4 | *1.4 | 20.0 | *3.5 | 317.0 |
| Solar—gas booster | *0.7 | *3.0 | *1.0 | — | *2.8 | — | *0.2 | *0.2 | *7.8 |
| Solar—unknown booster | *5.7 | *1.2 | *4.3 | *0.3 | *4.9 | *0.4 | *2.6 | *0.4 | 19.9 |
| Wood | 17.4 | 24.4 | *8.5 | *3.3 | 16.0 | *4.3 | — | — | 73.9 |
| Oil | *1.4 | — | — | — | *0.8 | — | — | — | *2.2 |
| Coal/coke | — | — | — | — | — | — | — | — | — |
| Other | *3.4 | *2.6 | *5.5 | *0.3 | — | *0.3 | *0.2 | — | 12.4 |
| Don't know | 19.0 | *5.8 | *4.9 | *3.2 | *3.5 | *0.4 | — | *0.2 | 36.9 |
| **Total dwellings(b)** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| **Proportion (%)** | | | | | | | | | |
| Electricity | 75.9 | 34.1 | 80.6 | 50.8 | 24.7 | 96.5 | 55.5 | 69.4 | 59.6 |
| Gas | 20.8 | 64.6 | 13.4 | 47.1 | 56.3 | *1.4 | *2.4 | 29.2 | 35.4 |
| Solar—electric booster | 2.5 | 0.6 | 5.6 | 2.5 | 18.5 | *0.7 | 38.3 | *3.0 | 4.4 |
| Solar—gas booster | — | *0.2 | *0.1 | — | *0.4 | — | *0.4 | *0.1 | *0.1 |
| Solar—unknown booster | *0.2 | *0.1 | *0.3 | *0.1 | *0.7 | *0.2 | *5.0 | *0.3 | 0.3 |
| Wood | 0.7 | 1.4 | *0.6 | *0.5 | 2.2 | *2.3 | — | — | 1.0 |
| Oil | *0.1 | — | — | — | *0.1 | — | — | — | — |
| Coal/coke | — | — | — | — | — | — | — | — | — |
| Other | *0.1 | *0.1 | *0.4 | *0.1 | — | *0.2 | *0.4 | — | 0.2 |
| Don't know | 0.8 | *0.3 | *0.4 | *0.5 | *0.5 | *0.2 | — | *0.1 | 0.5 |
| | | | | | JUNE 1994 | | | | |
| **Proportion (%)** | | | | | | | | | |
| Electricity | 77.7 | 38.0 | 82.0 | 48.9 | 36.6 | 95.9 | 44.9 | 79.1 | 62.3 |
| Gas | 19.9 | 61.0 | 13.4 | 48.8 | 47.7 | 1.0 | 2.3 | 20.1 | 33.6 |
| Solar | 3.5 | 0.8 | 4.8 | 3.3 | 20.5 | 0.6 | 57.5 | 3.1 | 4.9 |
| Other | 1.9 | 1.9 | 1.9 | 0.6 | 5.8 | 3.7 | 4.3 | 0.2 | 2.2 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Totals do not equal the sum of items in each column because more than one source may be specified.

Electricity was the dominant energy source used by households for cooking (59%), followed by gas (41%). Electricity use was highest in Tasmania (92%), followed by Queensland (78%) and the Australian Capital Territory (with 73%). Gas use was highest in Victoria (66%) and Western Australia (60%). Tasmania also had the highest proportion of households using wood for cooking (2%).

## 3.3 COOKING

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Electricity | 1 700.8 | 558.4 | 1 038.4 | 313.9 | 276.5 | 171.1 | 36.4 | 85.6 | 4 181.1 |
| Gas | 666.5 | 1 156.4 | 285.9 | 288.4 | 431.8 | 10.9 | 15.6 | 31.5 | 2 887.0 |
| Wood | 15.7 | 17.9 | *6.1 | *1.8 | *5.3 | *4.2 | *0.2 | *0.2 | 51.4 |
| Oil | *0.7 | — | — | — | — | *0.2 | — | — | *0.9 |
| Coal/coke | — | — | — | — | — | — | — | — | — |
| Other | *1.7 | **8.0 | *1.6 | *1.4 | *1.6 | — | — | *0.6 | 14.8 |
| **Total** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| | | | | | PROPORTION (%) | | | | |
| Electricity | 71.3 | 32.1 | 78.0 | 51.8 | 38.7 | 91.8 | 69.7 | 72.6 | 58.6 |
| Gas | 27.9 | 66.4 | 21.5 | 47.6 | 60.4 | 5.9 | 29.9 | 26.7 | 40.5 |
| Wood | 0.7 | 1.0 | *0.5 | *0.3 | *0.7 | *2.2 | *0.4 | *0.2 | 0.7 |
| Oil | — | — | — | — | — | *0.1 | — | — | — |
| Coal/coke | — | — | — | — | — | — | — | — | — |
| Other | *0.1 | *0.5 | *0.1 | *0.2 | *0.2 | — | — | *0.5 | 0.2 |

(a) Northern Territory data refers to mainly urban areas only.

The majority of households had at least one heater (80%). The Northern Territory rated lowest for there being at least one heater (11% of households), with the Australian Capital Territory the highest (99%). Households where there were two or more heaters rated highest in Tasmania and the Australian Capital Territory. The proportion of households with three or more heaters in 1999 was less than half that in 1994 (6% compared to 13%).

Not surprisingly, there were very few dwellings without heating in the colder areas of Australia (the Australian Capital Territory, Tasmania, and Victoria, all with 1% of dwellings being without heating), whereas respondents in the hotter climates generally reported dwellings without heating (the Northern Territory with 90%, and Queensland with 60%).

## 3.4 HEATERS

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Number of heaters | | | | | | | | | |
| One | 1 311.0 | 1 235.3 | 386.2 | 350.3 | 455.3 | 95.8 | *3.7 | 63.1 | 3 900.7 |
| Two | 495.7 | 394.6 | 105.6 | 163.3 | 117.6 | 55.2 | *1.6 | 32.8 | 1 366.6 |
| Three or more | 154.9 | 90.5 | 39.3 | 48.5 | 22.1 | 33.3 | *0.2 | 20.9 | 409.8 |
| Age of main heater | | | | | | | | | |
| Less than 1 year | 127.2 | 70.6 | 43.4 | 28.0 | 39.7 | 9.6 | *0.2 | *7.6 | 326.3 |
| 1 to less than 5 years | 599.4 | 355.8 | 178.2 | 122.5 | 192.7 | 44.0 | *1.7 | 31.8 | 1 526.2 |
| 5 to less than 10 years | 471.0 | 333.6 | 132.5 | 123.7 | 159.7 | 47.0 | *1.7 | 29.2 | 1 298.2 |
| 10 or more years | 654.9 | 807.5 | 158.8 | 244.1 | 170.7 | 67.5 | *1.2 | 39.0 | 2 143.6 |
| Don't know | 109.1 | 152.9 | 18.3 | 43.9 | 32.3 | 16.3 | *0.6 | *9.3 | 382.7 |
| No heating in dwelling | 423.8 | 20.2 | 800.8 | 43.3 | 120.2 | *2.1 | 46.7 | *1.1 | 1 458.1 |
| **Total dwellings** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| **Proportion (%)** | | | | | | | | | |
| Number of heaters | | | | | | | | | |
| One | 55.0 | 71.0 | 29.0 | 57.9 | 63.7 | 51.4 | *7.0 | 53.5 | 54.7 |
| Two | 20.8 | 22.7 | 7.9 | 27.0 | 16.4 | 29.6 | *3.1 | 27.8 | 19.2 |
| Three or more | 6.5 | 5.2 | 3.0 | 8.0 | 3.1 | 17.8 | *0.4 | 17.8 | 5.7 |
| Age of main heater | | | | | | | | | |
| Less than 1 year | 5.3 | 4.1 | 3.3 | 4.6 | 5.5 | 5.2 | *0.4 | *6.4 | 4.6 |
| 1 to less than 5 years | 25.1 | 20.4 | 13.4 | 20.2 | 26.9 | 23.6 | *3.3 | 26.9 | 21.4 |
| 5 to less than 10 years | 19.7 | 19.2 | 9.9 | 20.4 | 22.3 | 25.2 | *3.3 | 24.7 | 18.2 |
| 10 or more years | 27.5 | 46.4 | 11.9 | 40.3 | 23.9 | 36.2 | *2.3 | 33.1 | 30.0 |
| Don't know | 4.6 | 8.8 | 1.4 | 7.2 | 4.5 | 8.7 | *1.2 | *7.9 | 5.4 |
| No heating in dwelling | 17.8 | 1.2 | 60.1 | 7.2 | 16.8 | *1.1 | 89.5 | *0.9 | 20.4 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Number of heaters | | | | | | | | | |
| One | 49.1 | 60.9 | 29.5 | 44.8 | 51.7 | 34.8 | 12.1 | 33.0 | 47.5 |
| Two | 26.2 | 26.2 | 11.1 | 29.6 | 25.3 | 31.2 | 4.9 | 26.5 | 23.7 |
| Three or more | 13.0 | 12.3 | 4.9 | 19.7 | 9.7 | 33.8 | 1.3 | 40.1 | 12.6 |
| Age of main heater | | | | | | | | | |
| Less than 1 year | 7.5 | 6.3 | 3.5 | 5.9 | 7.7 | 7.7 | 4.1 | 10.6 | 6.4 |
| 1 to less than 5 years | 30.5 | 24.0 | 16.8 | 23.7 | 29.1 | 30.6 | 6.7 | 33.9 | 25.6 |
| 5 to less than 10 years | 24.4 | 26.3 | 12.7 | 22.2 | 22.5 | 28.7 | 4.4 | 22.0 | 22.4 |
| 10 or more years | 21.7 | 36.0 | 10.6 | 37.9 | 22.9 | 28.6 | 3.1 | 28.5 | 25.0 |
| Don't know | 4.1 | 6.8 | 1.8 | 4.4 | 4.5 | 4.2 | 0.0 | 4.4 | 4.4 |
| No heating in dwelling | 11.7 | 0.6 | 54.6 | 5.9 | 13.2 | 0.2 | 81.8 | 0.4 | 16.2 |

(a) Northern Territory data refers to mainly urban areas only.

The main specific type of space heater used in dwellings was non-ducted gas (23%), closely followed by non-ducted electric heaters (20%). Wood combustion heating was used by 13% of households. Non-ducted gas rated highest amongst households in Victoria (40%), whereas non-ducted electricity heating was highest for Australian Capital Territory households (31%). Tasmanians were the greatest users of wood combustion heaters and open wood fires (51% and 4% respectively).

## 3.5 DWELLINGS WITH HEATING, Heaters

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Electric—ducted | 37.3 | 22.9 | *4.9 | *5.9 | *4.4 | *2.8 | — | *2.8 | 80.9 |
| not ducted | 714.2 | 159.9 | 257.8 | 113.6 | 85.0 | 52.3 | *1.1 | 36.0 | 1 420.0 |
| Gas—ducted | 76.1 | 541.6 | *3.7 | 12.4 | 22.0 | *1.9 | — | 33.5 | 691.4 |
| not ducted | 451.2 | 690.3 | 30.8 | 182.2 | 254.8 | *9.4 | *1.8 | 26.7 | 1 647.1 |
| Reverse cycle air conditioner —ducted | 97.5 | 19.9 | 13.4 | 37.8 | 13.2 | *2.1 | *0.6 | *4.0 | 188.6 |
| not ducted | 144.7 | 13.1 | 48.4 | 71.5 | 17.0 | *4.0 | *0.2 | *2.7 | 301.6 |
| Wood combustion | 285.5 | 214.0 | 84.6 | 88.8 | 138.7 | 94.7 | *1.2 | *5.8 | 913.5 |
| Open wood fire | 48.1 | 24.5 | 27.2 | 14.4 | 12.4 | *7.5 | *0.2 | *0.6 | 134.8 |
| Oil fired heater | 69.0 | 16.5 | 24.9 | 24.1 | 17.3 | *6.3 | — | *3.9 | 161.9 |
| Pot belly | 16.7 | *1.8 | 14.8 | *6.4 | 22.0 | *2.3 | *0.4 | *0.4 | 64.8 |
| Other | 21.3 | 15.8 | 20.6 | *5.1 | *8.1 | *1.1 | — | *0.4 | 72.4 |
| No heating in dwelling | 423.8 | 20.2 | 800.8 | 43.3 | 120.2 | *2.1 | 46.7 | *1.1 | 1 458.1 |
| **Total** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| | | | | | PROPORTION (%) | | | | |
| Electric–ducted | 1.6 | 1.3 | *0.4 | *1.0 | *0.6 | *1.5 | 0.0 | *2.4 | 1.1 |
| not ducted | 29.9 | 9.2 | 19.4 | 18.8 | 11.9 | 28.0 | *2.2 | 30.5 | 19.9 |
| Gas–ducted | 3.2 | 31.1 | *0.3 | 2.1 | 3.1 | *1.0 | — | 28.4 | 9.7 |
| not ducted | 18.9 | 39.7 | 2.3 | 30.1 | 35.6 | *5.0 | *3.4 | 22.6 | 23.1 |
| Reverse cycle air conditioner –ducted | 4.1 | 1.1 | 1.0 | 6.2 | 1.9 | *1.1 | *1.2 | *3.4 | 2.6 |
| not ducted | 6.1 | 0.8 | 3.6 | 11.8 | 2.4 | *2.1 | *0.4 | *2.3 | 4.2 |
| Wood combustion | 12.0 | 12.3 | 6.4 | 14.7 | 19.4 | 50.8 | *2.3 | *5.0 | 12.8 |
| Open wood fire | 2.0 | 1.4 | 2.0 | 2.4 | 1.7 | *4.0 | *0.3 | *0.6 | 1.9 |
| Oil fired heater | 2.9 | 0.9 | 1.9 | 4.0 | 2.4 | *3.4 | — | *3.3 | 2.3 |
| Pot belly | 0.7 | *0.1 | 1.1 | *1.1 | 3.1 | *1.2 | *0.7 | *0.3 | 0.9 |
| Other | 0.9 | 0.9 | 1.5 | *0.8 | *1.1 | *0.6 | — | *0.3 | 1.0 |
| No heating in dwelling | 17.8 | 1.2 | 60.1 | 7.2 | 16.8 | *1.1 | 89.5 | *0.9 | 20.4 |

(a) Northern Territory data refers to mainly urban areas only.

## GREENPOWER

Greenpower uses various forms of energy from solar, wind, hydro and biomass (such as gas generated in landfills) sources to generate electrical power. All these sources of energy are renewable, and avoid the use of coal in power stations.

Of the households surveyed 3% stated that they were connected to a greenpower electricity scheme. Tasmania had the highest proportion of greenpower-connected households (88%), reflecting the high level of hydro-electric power generation which exists in this State. Although all the other remaining States and Territories had connection rates of 1.5% or lower, Western Australia had the highest level of these households connected to greenpower, primarily because of wind generated electricity, particularly that sourced from near Esperance. The Australian Capital Territory had the highest proportion of households stating they were not connected to a greenpower scheme (94%).

### 3.6 GREENPOWER

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Connected to greenpower scheme | 24.9 | *6.9 | 19.0 | *1.8 | 10.4 | 164.1 | *0.2 | *0.8 | 228.1 |
| Not connected to greenpower scheme | 2 116.9 | 1 591.8 | 1 191.8 | 563.4 | 664.6 | 12.8 | 46.9 | 111.1 | 6 299.2 |
| Don't know | 243.6 | 141.9 | 121.1 | 40.3 | 40.2 | 9.6 | *5.1 | *6.1 | 607.8 |
| **Total** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| | | | | | PROPORTION (%) | | | | |
| Connected to greenpower scheme | 1.0 | *0.4 | 1.4 | *0.3 | 1.5 | 88.0 | *0.4 | *0.7 | 3.2 |
| Not connected to greenpower scheme | 88.7 | 91.4 | 89.5 | 93.1 | 92.9 | 6.8 | 89.9 | 94.2 | 88.3 |
| Don't know | 10.2 | 8.2 | 9.1 | 6.7 | 5.6 | 5.1 | *9.7 | *5.1 | 8.5 |

(a) Northern Territory data refers to mainly urban areas only.

Of those households not connected to a greenpower scheme, the majority (79%) were not aware that these schemes existed or were available to them. This lack of awareness was highest in Western Australia and South Australia (both with 88%), and lowest in the Australian Capital Territory (59%).

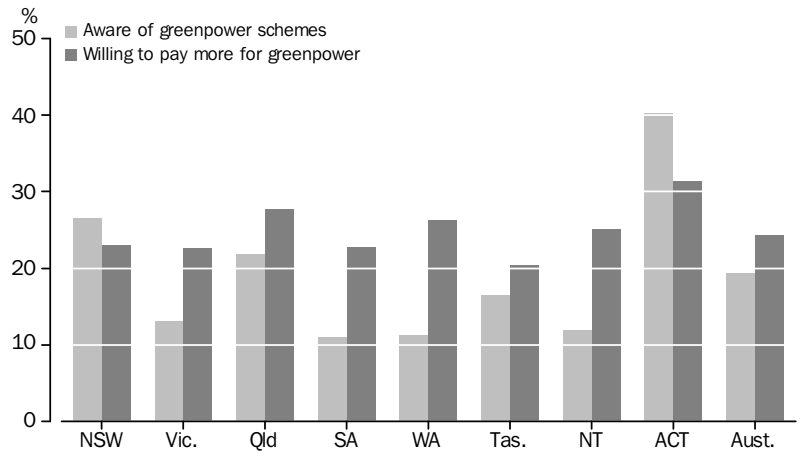
The majority of households (56%) stated that they were not willing to pay more for electricity generated from greenpower schemes. Of those who *were* willing to pay more, the highest proportion occurred in the Australian Capital Territory (31%) and Queensland (28%). Around 5% of those surveyed believed that they should not have to pay more for power generated using greenpower sources.

## 3.7 HOUSEHOLDS NOT CONNECTED TO GREENPOWER, Aware Of Schemes

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | NUMBER ('000) | | | | | |
| Aware of greenpower schemes | 560.4 | 209.1 | 260.4 | 62.4 | 75.1 | *2.1 | *5.6 | 44.7 | 1 219.9 |
| Not aware of greenpower schemes | 1 499.5 | 1 364.7 | 910.8 | 495.3 | 584.1 | 10.3 | 40.9 | 65.7 | 4 971.3 |
| Don't know | 57.0 | 18.0 | 20.5 | *5.7 | *5.4 | *0.4 | *0.4 | *0.7 | 108.0 |
| Willing to pay more for greenpower | 486.4 | 359.9 | 331.9 | 128.3 | 175.0 | *2.6 | 11.8 | 34.8 | 1 530.7 |
| Not willing to pay more for greenpower | 1 204.9 | 902.7 | 632.7 | 310.8 | 370.3 | *7.3 | 28.1 | 61.9 | 3 518.6 |
| Should not have to pay more for greenpower | 112.8 | 67.5 | 62.3 | 23.6 | 20.6 | *0.4 | *4.2 | *2.7 | 294.2 |
| Don't know | 312.8 | 261.7 | 164.9 | 100.7 | 98.6 | *2.5 | *2.8 | 11.7 | 955.7 |
| **Total** | **2 116.9** | **1 591.8** | **1 191.8** | **563.4** | **664.6** | **12.8** | **46.9** | **111.1** | **6 299.2** |
| | | | | PROPORTION (%) | | | | | |
| Aware of greenpower schemes | 26.5 | 13.1 | 21.9 | 11.1 | 11.3 | *16.5 | *12.0 | 40.3 | 19.4 |
| Not aware of greenpower schemes | 70.8 | 85.7 | 76.4 | 87.9 | 87.9 | 80.6 | 87.2 | 59.1 | 78.9 |
| Don't know | 2.7 | 1.1 | 1.7 | *1.0 | *0.8 | *3.0 | *0.8 | *0.6 | 1.7 |
| Willing to pay more for greenpower | 23.0 | 22.6 | 27.8 | 22.8 | 26.3 | *20.5 | 25.1 | 31.3 | 24.3 |
| Not willing to pay more for greenpower | 56.9 | 56.7 | 53.1 | 55.2 | 55.7 | *57.1 | 59.8 | 55.7 | 55.9 |
| Should not have to pay more for greenpower | 5.3 | 4.2 | 5.2 | 4.2 | 3.1 | *3.1 | *9.0 | *2.4 | 4.7 |
| Don't know | 14.8 | 16.4 | 13.8 | 17.9 | 14.8 | *19.3 | *6.0 | 10.6 | 15.2 |

(a) Northern Territory data refers to mainly urban areas only.

## 3.8 GREENPOWER



GREENPOWER *continued*

Of the households who were willing to pay more for greenpower, the majority had an electricity cost for the 12 months to March 1999 of between $250 and $500 per year (33% of households).

**3.9** HOUSEHOLDS WILLING TO PAY MORE FOR GREENPOWER, Electricity Cost(a)

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(b)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Less than $250 | 37.2 | 14.0 | 30.5 | *5.9 | 18.9 | — | *0.2 | *2.3 | 109.0 |
| $250 to less than $500 | 162.3 | 124.0 | 101.5 | 39.6 | 59.7 | *0.5 | *1.1 | 9.6 | 498.4 |
| $500 to less than $750 | 108.8 | 87.2 | 89.5 | 29.8 | 42.8 | *0.8 | *2.1 | *5.7 | 366.7 |
| $750 to less than $1000 | 118.3 | 97.7 | 65.3 | 28.5 | 25.9 | *0.6 | *3.7 | 10.2 | 350.2 |
| More than $1000 | 59.8 | 36.9 | 45.1 | 24.5 | 27.8 | *0.8 | *4.7 | *6.9 | 206.5 |
| **Total** | **486.4** | **359.9** | **331.9** | **128.3** | **175.0** | ***2.6** | **11.8** | **34.8** | **1 530.7** |
| | | | | | PROPORTION (%) | | | | |
| Less than $250 | 7.6 | 3.9 | 9.2 | *4.6 | 10.8 | — | *1.8 | *6.6 | 7.1 |
| $250 to less than $500 | 33.4 | 34.5 | 30.6 | 30.8 | 34.1 | *20.3 | *9.1 | 27.7 | 32.6 |
| $500 to less than $750 | 22.4 | 24.2 | 27.0 | 23.2 | 24.4 | *28.7 | *18.1 | *16.5 | 24.0 |
| $750 to less than $1000 | 24.3 | 27.2 | 19.7 | 22.2 | 14.8 | *21.6 | *30.9 | 29.5 | 22.9 |
| More than $1000 | 12.3 | 10.3 | 13.6 | 19.1 | 15.9 | *29.4 | *40.0 | *19.8 | 13.5 |

(a) Last 12 months.

(b) Northern Territory data refers to mainly urban areas only.

Of those households willing to pay more for greenpower, most were prepared to pay between $50 and $150 more per year (54%).

## 3.10 HOUSEHOLDS WILLING TO PAY MORE FOR GREENPOWER

| *Extra annual cost willing to pay* | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | NUMBER ('000) | | | | | |
| Less than $25 | 32.4 | 13.2 | 24.6 | *4.8 | 10.4 | *0.2 | *0.2 | *1.4 | 87.2 |
| $25 to less than $50 | 38.7 | 32.9 | 37.6 | 11.7 | 15.7 | — | *0.4 | *2.7 | 139.7 |
| $50 to less than $100 | 119.4 | 109.0 | 94.2 | 32.2 | 50.5 | *0.6 | *1.7 | *8.2 | 415.6 |
| $100 to less than $150 | 135.4 | 99.5 | 89.2 | 40.0 | 45.3 | *1.3 | *4.0 | *9.1 | 423.8 |
| $150 to less than $200 | 25.7 | 11.9 | 15.0 | *4.5 | 10.3 | *0.2 | *0.7 | *2.0 | 70.4 |
| $200 to less than $250 | 67.4 | 62.8 | 37.9 | 22.0 | 18.1 | — | *3.4 | *5.6 | 217.2 |
| $250 to less than $500 | 39.4 | 19.2 | 22.7 | *8.7 | 16.0 | *0.4 | *1.4 | *3.4 | 111.2 |
| $500 to less than $1000 | 28.1 | 11.4 | 10.7 | *4.4 | *8.7 | — | — | *2.3 | 65.6 |
| **Total** | **486.4** | **359.9** | **331.9** | **128.3** | **175.0** | ***2.6** | **11.8** | **34.8** | **1 530.7** |
| | | | | PROPORTION (%) | | | | | |
| Less than $25 | 6.7 | 3.7 | 7.4 | *3.8 | 6.0 | *7.1 | *1.8 | *4.1 | 5.7 |
| $25 to less than $50 | 7.9 | 9.1 | 11.3 | 9.1 | 9.0 | — | *3.8 | *7.8 | 9.1 |
| $50 to less than $100 | 24.5 | 30.3 | 28.4 | 25.1 | 28.8 | *21.3 | *14.2 | *23.6 | 27.1 |
| $100 to less than $150 | 27.8 | 27.7 | 26.9 | 31.2 | 25.9 | *49.6 | *33.5 | *26.3 | 27.7 |
| $150 to less than $200 | 5.3 | 3.3 | 4.5 | *3.5 | 5.9 | *7.1 | *6.2 | *5.6 | 4.6 |
| $200 to less than $250 | 13.9 | 17.5 | 11.4 | 17.1 | 10.3 | — | *28.4 | *16.0 | 14.2 |
| $250 to less than $500 | 8.1 | 5.3 | 6.8 | *6.8 | 9.1 | *15.0 | *12.1 | *9.9 | 7.3 |
| $500 to less than $1000 | 5.8 | 3.2 | 3.2 | *3.4 | *5.0 | — | — | *6.7 | 4.3 |

(a) Northern Territory data refers to mainly urban areas only.

# CHAPTER 4 HOUSEHOLD APPLIANCES

MAIN FINDINGS

- Virtually all households owned a refrigerator (99.7%) and television (99%), most owned a washing machine (95%), and just over half (53%) had a clothes dryer.
- The predominant type of air conditioner was reverse cycle, and located in a wall or window.
- Cold water was used by the majority (64%) of households to wash their clothes.
- Of those households whose washing machines have a suds saver, most (67%) do not use it.
- Of the appliances bought or replaced by the household in the 12 months prior to the survey, cost was the major consideration (49%), followed by how much energy the appliance used (34%). Environmental considerations were nominated by 8% of households.

## APPLIANCES

Virtually all households owned a refrigerator, most owned a washing machine (95%), and just over half (53%) had a clothes dryer. Compared with 1994, there has been a rise in the proportion of households that own a clothes dryer, air conditioner, and dishwasher, while the proportion of separate freezers has fallen.

Twenty five per cent of Queensland households had air conditioners. This compared with 54% in South Australia and 44% in Victoria. Not surprisingly, Northern Territory households reported high levels of air conditioner ownership (84%), while Tasmania reported low levels (3%).

### 4.1 HOUSEHOLD APPLIANCES(a)

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(b)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | MARCH 1999 | | | | |
| **Number ('000)** | | | | | | | | | |
| Refrigerator | 2 375.6 | 1 737.6 | 1 328.5 | 604.7 | 713.3 | 185.3 | 52.2 | 117.7 | 7 115.0 |
| Washing machine | 2 234.8 | 1 658.3 | 1 276.8 | 573.4 | 671.2 | 181.1 | 49.6 | 112.9 | 6 758.0 |
| Clothes dryer | 1 325.2 | 955.8 | 699.0 | 292.8 | 322.7 | 104.6 | 17.1 | 66.3 | 3 783.7 |
| Separate freezer | 910.2 | 688.5 | 544.9 | 259.3 | 281.7 | 115.0 | 21.6 | 39.5 | 2 860.6 |
| Air conditioner | 659.2 | 757.8 | 330.3 | 329.1 | 324.9 | *4.7 | 43.6 | 23.5 | 2 473.0 |
| Dishwasher | 744.4 | 650.2 | 380.5 | 122.6 | 143.2 | 44.9 | 10.4 | 54.3 | 2 150.5 |
| **Total** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| **Proportion (%)** | | | | | | | | | |
| Refrigerator | 99.6 | 99.8 | 99.7 | 99.9 | 99.7 | 99.4 | 100.0 | 99.8 | 99.7 |
| Washing machine | 93.7 | 95.3 | 95.9 | 94.7 | 93.8 | 97.2 | 95.0 | 95.7 | 94.7 |
| Clothes dryer | 55.6 | 54.9 | 52.5 | 48.4 | 45.1 | 56.1 | 32.7 | 56.2 | 53.0 |
| Separate freezer | 38.2 | 39.6 | 40.9 | 42.8 | 39.4 | 61.7 | 41.5 | 33.5 | 40.1 |
| Air conditioner | 27.6 | 43.5 | 24.8 | 54.3 | 45.4 | *2.5 | 83.6 | 19.9 | 34.7 |
| Dishwasher | 31.2 | 37.4 | 28.6 | 20.2 | 20.0 | 24.1 | 20.0 | 46.0 | 30.1 |
| | | | | | JUNE 1994 | | | | |
| **Proportion (%)** | | | | | | | | | |
| Refrigerator | 99.6 | 99.9 | 99.7 | 99.6 | 99.6 | 99.7 | 100.0 | 99.9 | 99.7 |
| Washing machine | 92.6 | 95.0 | 95.0 | 94.5 | 94.6 | 97.2 | 88.0 | 96.8 | 94.2 |
| Clothes dryer | 52.7 | 57.3 | 49.4 | 49.1 | 41.4 | 54.6 | 23.3 | 54.2 | 51.7 |
| Separate freezer | 41.7 | 45.4 | 45.4 | 47.6 | 47.1 | 63.8 | 47.1 | 41.0 | 44.9 |
| Air conditioner | 30.8 | 36.9 | 17.6 | 61.5 | 35.5 | 2.4 | 76.4 | 16.7 | 32.5 |
| Dishwasher | 24.5 | 31.9 | 24.7 | 18.6 | 16.6 | 19.4 | 14.5 | 38.0 | 25.1 |

(a) Totals do not equal the sum of items in each column because more than one appliance may be specified.

(b) Northern Territory data refers to mainly urban areas only.

Of the non white-good type of appliances surveyed, almost all households had a television set. Around 45% of households had a computer, with the highest proportion occurring in the Australian Capital Territory (62%), and the lowest in Tasmania (with 35%). Only a small proportion of households reported that they did not have any of the appliances that were surveyed.

## 4.2 NON WHITE-GOOD HOUSEHOLD APPLIANCES

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | NUMBER ('000) | | | | |
| Microwave | 2 017.6 | 1 431.0 | 1 087.7 | 491.1 | 594.5 | 150.4 | 41.7 | 102.1 | 5 916.2 |
| Television | 2 359.2 | 1 727.6 | 1 313.7 | 603.3 | 701.5 | 184.3 | 50.6 | 116.2 | 7 056.4 |
| Video recorder | 2 072.1 | 1 518.7 | 1 142.0 | 524.2 | 628.0 | 159.4 | 46.8 | 104.6 | 6 195.6 |
| Stereo system | 1 858.4 | 1 338.3 | 1 040.6 | 457.3 | 573.8 | 143.7 | 45.0 | 101.3 | 5 558.4 |
| Computer | 1 052.7 | 811.3 | 577.3 | 259.5 | 332.4 | 64.3 | 23.7 | 73.0 | 3 194.2 |
| Vacuum cleaner | 2 276.1 | 1 682.4 | 1 243.9 | 575.8 | 675.8 | 179.6 | 46.5 | 113.2 | 6 793.4 |
| Portable fan | 1 661.6 | 1 206.3 | 1 049.4 | 408.0 | 511.7 | 94.9 | 28.3 | 86.4 | 5 046.5 |
| Ceiling fan | 827.4 | 603.7 | 762.2 | 274.6 | 298.7 | 44.4 | 47.6 | 26.6 | 2 885.2 |
| None of the above | *3.3 | *1.7 | *1.8 | — | — | — | — | — | *6.9 |
| **Total (b)** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| | | | | | PROPORTION (%) | | | | |
| Microwave | 84.6 | 82.2 | 81.7 | 81.1 | 83.1 | 80.7 | 79.9 | 86.6 | 82.9 |
| Television | 98.9 | 99.2 | 98.6 | 99.6 | 98.1 | 98.9 | 96.9 | 98.5 | 98.9 |
| Video recorder | 86.9 | 87.2 | 85.7 | 86.6 | 87.8 | 85.5 | 89.6 | 88.7 | 86.8 |
| Stereo system | 77.9 | 76.9 | 78.1 | 75.5 | 80.2 | 77.1 | 86.2 | 85.9 | 77.9 |
| Computer | 44.1 | 46.6 | 43.3 | 42.9 | 46.5 | 34.5 | 45.3 | 61.9 | 44.8 |
| Vacuum cleaner | 95.4 | 96.7 | 93.4 | 95.1 | 94.5 | 96.4 | 89.1 | 95.9 | 95.2 |
| Portable fan | 69.7 | 69.3 | 78.8 | 67.4 | 71.5 | 50.9 | 54.2 | 73.2 | 70.7 |
| Ceiling fan | 34.7 | 34.7 | 57.2 | 45.3 | 41.8 | 23.8 | 91.3 | 22.6 | 40.4 |
| None of the above | *0.1 | *0.1 | *0.1 | — | — | — | — | — | *0.1 |

(a) Northern Territory data refers to mainly urban areas only.

(b) Totals do not equal the sum of items in each column because more than one item may be specified.

The survey showed that, in general, households with just one person reported having less of the appliances specified than for the other household types, in many ways reflecting the financial and age characteristics that can occur in one person households.

For example, the proportion of one person households with a computer was 21%, compared with 68% of households consisting of a couple with children.

## 4.3 NON WHITE-GOOD HOUSEHOLD APPLIANCES, By Household Type

| | *One person* | *Couple only* | *Other households with all members over 15* | *Couple, dependent child(ren)* | *One parent, dependent child(ren)* | *All other households* | *Total* |
|---|---|---|---|---|---|---|---|
| | | | | NUMBER ('000) | | | |
| Microwave | 1 183.3 | 1 440.7 | 918.0 | 1 466.4 | 294.9 | 612.9 | 5 916.2 |
| Television | 1 677.3 | 1 649.5 | 1 034.3 | 1 580.1 | 354.1 | 761.0 | 7 056.4 |
| Video recorder | 1 212.1 | 1 490.3 | 978.8 | 1 532.8 | 308.7 | 672.8 | 6 195.6 |
| Stereo system | 1 058.0 | 1 261.3 | 882.7 | 1 415.4 | 284.8 | 656.2 | 5 558.4 |
| Computer | 356.2 | 592.1 | 633.9 | 1 081.3 | 161.9 | 368.8 | 3 194.2 |
| Vacuum cleaner | 1 581.8 | 1 618.4 | 1 018.2 | 1 557.7 | 320.9 | 696.4 | 6 793.4 |
| Portable fan | 1 136.7 | 1 203.7 | 753.3 | 1 166.3 | 246.5 | 540.0 | 5 046.5 |
| Ceiling fan | 541.0 | 771.3 | 475.6 | 723.5 | 123.2 | 250.6 | 2 885.2 |
| None of the above | *5.1 | — | — | *0.7 | *1.1 | — | *6.9 |
| **Total (a)** | **1 715.3** | **1 661.6** | **1 037.3** | **1 597.2** | **357.0** | **766.8** | **7 135.2** |
| | | | | PROPORTION (%) | | | |
| Microwave | 69.0 | 86.7 | 88.5 | 91.8 | 82.6 | 79.9 | 82.9 |
| Television | 97.8 | 99.3 | 99.7 | 98.9 | 99.2 | 99.2 | 98.9 |
| Video recorder | 70.7 | 89.7 | 94.4 | 96.0 | 86.5 | 87.7 | 86.8 |
| Stereo system | 61.7 | 75.9 | 85.1 | 88.6 | 79.8 | 85.6 | 77.9 |
| Computer | 20.8 | 35.6 | 61.1 | 67.7 | 45.4 | 48.1 | 44.8 |
| Vacuum cleaner | 92.2 | 97.4 | 98.2 | 97.5 | 89.9 | 90.8 | 95.2 |
| Portable fan | 66.3 | 72.4 | 72.6 | 73.0 | 69.1 | 70.4 | 70.7 |
| Ceiling fan | 31.5 | 46.4 | 45.8 | 45.3 | 34.5 | 32.7 | 40.4 |
| None of the above | *0.3 | — | — | — | *0.3 | — | *0.1 |

(a) Totals do not equal the sum of items in each column because more than one item may be specified.

## 4.4 SELECTED HOUSEHOLD APPLIANCES

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Refrigerators | | | | | | | | | |
| None | 9.8 | *3.0 | *3.4 | *0.8 | *1.9 | *1.1 | – | *0.2 | 20.2 |
| One | 1 693.8 | 1 310.5 | 848.2 | 440.0 | 496.3 | 147.3 | 34.5 | 84.6 | 5 055.2 |
| Two | 609.1 | 392.6 | 433.3 | 148.8 | 194.1 | 34.8 | 14.3 | 31.1 | 1 858.0 |
| Three or more | 72.6 | 34.6 | 47.0 | 16.0 | 23.0 | *3.2 | *3.4 | *2.0 | 201.8 |
| Separate freezers | | | | | | | | | |
| None | 1 475.2 | 1 052.1 | 786.9 | 346.2 | 433.5 | 71.4 | 30.5 | 78.5 | 4 274.5 |
| One | 847.5 | 638.9 | 487.0 | 232.5 | 258.3 | 100.8 | 20.7 | 38.3 | 2 623.9 |
| Two | 56.3 | 48.4 | 55.7 | 24.1 | 21.1 | 13.4 | *0.8 | *0.8 | 220.6 |
| Three or more | *6.4 | *1.1 | *2.3 | *2.7 | *2.3 | *0.7 | *0.2 | *0.4 | 16.1 |
| Air conditioners | | | | | | | | | |
| None | 1 726.3 | 982.8 | 1 001.6 | 276.4 | 390.3 | 181.8 | *8.5 | 94.5 | 4 662.1 |
| One | 557.5 | 661.4 | 215.8 | 272.8 | 271.3 | *4.5 | 17.4 | 21.7 | 2 022.3 |
| Two | 83.1 | 83.2 | 67.7 | 50.2 | 40.2 | *0.2 | 12.7 | *1.4 | 338.7 |
| Three or more | 18.6 | 13.2 | 46.8 | *6.0 | 13.4 | 0.0 | 13.5 | *0.4 | 112.0 |
| **Total** | **2 385.4** | **1 740.6** | **1 331.9** | **605.5** | **715.2** | **186.4** | **52.2** | **118.0** | **7 135.2** |
| **Proportion (%)** | | | | | | | | | |
| Refrigerators | | | | | | | | | |
| None | 0.4 | *0.2 | *0.3 | *0.1 | *0.3 | *0.6 | – | *0.2 | 0.3 |
| One | 71.0 | 75.3 | 63.7 | 72.7 | 69.4 | 79.0 | 66.2 | 71.7 | 70.8 |
| Two | 25.5 | 22.6 | 32.5 | 24.6 | 27.1 | 18.7 | 27.4 | 26.4 | 26.0 |
| Three or more | 3.0 | 2.0 | 3.5 | 2.6 | 3.2 | *1.7 | *6.4 | *1.7 | 2.8 |
| Separate freezers | | | | | | | | | |
| None | 61.8 | 60.4 | 59.1 | 57.2 | 60.6 | 38.3 | 58.5 | 66.5 | 59.9 |
| One | 35.5 | 36.7 | 36.6 | 38.4 | 36.1 | 54.1 | 39.6 | 32.5 | 36.8 |
| Two | 2.4 | 2.8 | 4.2 | 4.0 | 3.0 | 7.2 | *1.5 | *0.7 | 3.1 |
| Three or more | *0.3 | *0.1 | *0.2 | *0.4 | *0.3 | *0.4 | *0.4 | *0.3 | 0.2 |
| Air conditioners | | | | | | | | | |
| None | 72.4 | 56.5 | 75.2 | 45.7 | 54.6 | 97.5 | *16.4 | 80.1 | 65.3 |
| One | 23.4 | 38.0 | 16.2 | 45.1 | 37.9 | *2.4 | 33.3 | 18.4 | 28.3 |
| Two | 3.5 | 4.8 | 5.1 | 8.3 | 5.6 | *0.1 | 24.4 | *1.2 | 4.7 |
| Three or more | 0.8 | 0.8 | 3.5 | *1.0 | 1.9 | 0.0 | 26.0 | *0.4 | 1.6 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Refrigerators | | | | | | | | | |
| None | 0.4 | 0.1 | 0.3 | 0.4 | 0.4 | 0.3 | – | 0.1 | 0.3 |
| One | 77.1 | 79.0 | 68.4 | 76.7 | 73.8 | 82.3 | 67.7 | 79.5 | 75.8 |
| Two | 20.4 | 19.1 | 29.1 | 21.2 | 23.4 | 16.3 | 31.0 | 19.3 | 21.9 |
| Three or more | 2.1 | 1.9 | 2.2 | 1.7 | 2.4 | 1.0 | 1.3 | 1.1 | 2.0 |
| Separate freezers | | | | | | | | | |
| None | 58.3 | 54.6 | 54.6 | 52.4 | 52.9 | 36.2 | 52.9 | 59.0 | 55.1 |
| One | 38.7 | 41.8 | 41.2 | 43.1 | 43.0 | 54.8 | 41.2 | 39.4 | 41.2 |
| Two | 2.6 | 3.2 | 3.7 | 3.9 | 3.9 | 8.0 | 5.5 | 1.6 | 3.4 |
| Three or more | 0.3 | 0.3 | 0.5 | 0.6 | 0.1 | 1.0 | 0.4 | 0.0 | 0.4 |
| Air conditioners | | | | | | | | | |
| None | 69.2 | 63.1 | 82.4 | 38.5 | 64.5 | 97.6 | 23.6 | 83.3 | 67.5 |
| One | 26.5 | 32.5 | 12.1 | 51.5 | 29.5 | 2.4 | 42.5 | 15.1 | 27.2 |
| Two | 3.3 | 3.7 | 3.4 | 8.5 | 3.9 | 0.0 | 20.5 | 1.2 | 3.9 |
| Three or more | 1.0 | 0.7 | 2.1 | 1.5 | 2.2 | 0.0 | 13.3 | 0.4 | 1.3 |

(a) Northern Territory data refers to mainly urban areas only.

## SEPARATE FREEZERS

For households with separate freezers, the dominant type of freezer is a chest model, as it was in 1994. These type of freezers were used in higher proportions in Tasmania (with 66% of households). Larger proportions of households in the Australian Capital Territory (54%), Western Australia (51%) and Victoria (51%) had upright freezers.

### 4.5 HOUSEHOLDS WITH SEPARATE FREEZERS, Type of Freezer

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | MARCH 1999 | | | | |
| **Number ('000)** | | | | | | | | | |
| Chest | 458.6 | 340.7 | 314.7 | 130.3 | 139.1 | 76.0 | 11.9 | 18.1 | 1 489.5 |
| Upright | 451.6 | 347.8 | 230.2 | 128.9 | 142.5 | 39.0 | 9.7 | 21.4 | 1 371.2 |
| **Total** | **910.2** | **688.5** | **544.9** | **259.3** | **281.7** | **115.0** | **21.6** | **39.5** | **2 860.6** |
| **Proportion (%)** | | | | | | | | | |
| Chest | 50.4 | 49.5 | 57.8 | 50.3 | 49.4 | 66.1 | 55.1 | 45.9 | 52.1 |
| Upright | 49.6 | 50.5 | 42.2 | 49.7 | 50.6 | 33.9 | 44.9 | 54.1 | 47.9 |
| | | | | | JUNE 1994 | | | | |
| **Proportion (%)** | | | | | | | | | |
| Chest | 49.5 | 52.3 | 60.4 | 52.0 | 45.8 | 66.9 | 56.6 | 49.5 | 52.8 |
| Upright | 44.4 | 42.8 | 36.9 | 44.6 | 49.0 | 28.6 | 35.9 | 48.3 | 42.5 |
| Twin door on fridge | 6.0 | 4.9 | 2.6 | 3.2 | 4.7 | 4.2 | 7.5 | 2.2 | 4.6 |
| Other | 0.1 | 0.1 | 0.1 | 0.2 | 0.5 | 0.3 | — | — | 0.1 |

(a) Northern Territory data refers to mainly urban areas only.

## AIR CONDITIONERS

The predominant type of air conditioner reported was reverse cycle, and located in a wall or window.

Reverse cycle air conditioners were reported by higher proportions of households in New South Wales and the Australian Capital Territory (59% and 56%, respectively). The Northern Territory had the lowest proportion of households using of reverse cycle air conditioners (4%), but the highest proportion using refrigerated units (77%). Higher proportions of households in the drier climates of Western Australia and South Australia (48% and 36%, respectively) used evaporative units.

## 4.6 HOUSEHOLDS WITH AIR CONDITIONERS, Type Of Air Conditioner

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Reverse cycle | 391.8 | 229.4 | 77.7 | 117.4 | 77.8 | *2.6 | *1.9 | 13.3 | 911.8 |
| Refrigerated | 109.8 | 309.4 | 164.3 | 91.4 | 88.6 | *0.9 | 33.8 | *2.9 | 801.1 |
| Evaporative | 137.5 | 184.0 | 67.7 | 119.3 | 155.9 | *0.7 | *7.7 | *6.7 | 679.6 |
| Don't know | 20.8 | 35.0 | 20.6 | *3.6 | *3.8 | *0.6 | *0.4 | *0.6 | 85.3 |
| **Total** | **659.8** | **757.8** | **330.3** | **331.6** | **326.1** | ***4.9** | **43.9** | **23.5** | **2 477.8** |
| **Proportion (%)** | | | | | | | | | |
| Reverse cycle | 59.4 | 30.3 | 23.5 | 35.4 | 23.9 | *53.7 | *4.3 | 56.4 | 36.8 |
| Refrigerated | 16.6 | 40.8 | 49.7 | 27.6 | 27.2 | *19.0 | 77.2 | *12.2 | 32.3 |
| Evaporative | 20.8 | 24.3 | 20.5 | 36.0 | 47.8 | *15.4 | *17.6 | *28.7 | 27.4 |
| Don't know | 3.1 | 4.6 | 6.2 | *1.1 | *1.2 | *11.8 | *0.9 | *2.7 | 3.4 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Reverse cycle | 67.5 | 41.6 | 36.6 | 52.9 | 33.2 | *51.5 | *15.0 | 50.7 | 50.0 |
| Refrigerated | 14.2 | 36.7 | 39.1 | 23.4 | 33.3 | *8.9 | 63.3 | *13.6 | 27.4 |
| Evaporative | 16.1 | 16.8 | 18.9 | 23.1 | 30.3 | *31.2 | *20.0 | *34.6 | 19.5 |
| Don't know | 2.2 | 4.8 | 5.4 | *0.6 | *3.1 | *8.4 | *1.7 | *1.1 | 3.1 |

(a) Northern Territory data refers to mainly urban areas only.

Air conditioners set in a wall or window were reported in higher proportions by households in Queensland (83%). Western Australia had the highest proportions of ducted air conditioning systems (42%), while Tasmania had the highest proportion of portable air conditioners (23%).

## 4.7 HOUSEHOLDS WITH AIR CONDITIONERS, Location Of Air Conditioner

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Set in wall/window | 609.0 | 587.5 | 315.0 | 273.7 | 186.0 | *6.0 | 31.3 | 16.8 | 2 025.2 |
| Ducted | 152.5 | 133.0 | 36.3 | 111.3 | 143.1 | *0.8 | 12.2 | *5.6 | 594.7 |
| Portable | 42.3 | 50.4 | 27.4 | 16.7 | 12.9 | *2.1 | *0.4 | *3.8 | 155.9 |
| **Total** | **803.8** | **770.9** | **378.7** | **401.6** | **341.9** | ***8.8** | **43.9** | **26.2** | **2 775.8** |
| **Proportion (%)** | | | | | | | | | |
| Set in wall/window | 75.8 | 76.2 | 83.2 | 68.1 | 54.4 | *68.1 | 71.3 | 64.1 | 73.0 |
| Ducted | 19.0 | 17.3 | 9.6 | 27.7 | 41.8 | *8.6 | 27.7 | *21.4 | 21.4 |
| Portable | 5.3 | 6.5 | 7.2 | 4.2 | 3.8 | *23.4 | *0.9 | *14.5 | 5.6 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Set in wall/window | 71.9 | 79.2 | 78.7 | 70.1 | 63.4 | *39.5 | 77.5 | 53.6 | 73.3 |
| Ducted | 20.3 | 12.5 | 6.6 | 25.3 | 30.0 | *21.0 | *21.4 | *17.2 | 18.6 |
| Portable | 7.8 | 8.3 | 14.6 | 4.5 | 6.5 | *39.5 | *1.1 | *29.2 | 8.0 |

(a) Northern Territory data refers to mainly urban areas only.

## WASHING MACHINES

Top loading automatics were the dominant type of washing machine (87%), followed by front loading automatics (7%). Most of these machines were reported as not having a suds saver feature (45%). South Australia had the highest proportion of washing machines with this feature (51%).

### 4.8 HOUSEHOLDS WITH WASHING MACHINES, Type Of Washing Machine

| | *NSW* | *Vic.* | *Qld* | *SA* | *WA* | *Tas.* | *NT(a)* | *ACT* | *Aust.* |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Type of washing machine | | | | | | | | | |
| Top loading automatic | 1 978.0 | 1 468.9 | 1 112.7 | 429.9 | 570.9 | 155.4 | 47.1 | 100.0 | 5 862.9 |
| Front loading automatic | 135.7 | 123.0 | 67.7 | 47.5 | 45.0 | *6.5 | *1.4 | 11.4 | 438.3 |
| Twin tub | 108.1 | 48.9 | 90.2 | 86.5 | 50.5 | 17.8 | *1.1 | *0.6 | 403.6 |
| Wringer | *5.3 | *5.1 | *2.3 | *4.3 | *2.4 | *0.5 | — | *0.2 | 20.0 |
| Other | *7.8 | 12.3 | *3.9 | *5.3 | *2.4 | *0.9 | — | *0.7 | 33.2 |
| **Total** | **2 234.8** | **1 658.3** | **1 276.8** | **573.4** | **671.2** | **181.1** | **49.6** | **112.9** | **6 758.0** |
| **Proportion (%)** | | | | | | | | | |
| Type of washing machine | | | | | | | | | |
| Top loading automatic | 88.5 | 88.6 | 87.2 | 75.0 | 85.1 | 85.8 | 94.9 | 88.6 | 86.8 |
| Front loading automatic | 6.1 | 7.4 | 5.3 | 8.3 | 6.7 | *3.6 | *2.9 | 10.1 | 6.5 |
| Twin tub | 4.8 | 3.0 | 7.1 | 15.1 | 7.5 | 9.8 | *2.2 | *0.5 | 6.0 |
| Wringer | *0.2 | *0.3 | *0.2 | *0.7 | *0.4 | *0.3 | — | *0.1 | 0.3 |
| Other | *0.3 | 0.7 | *0.3 | *0.9 | *0.4 | *0.5 | — | *0.6 | 0.5 |
| Automatic washing machine with suds saver | | | | | | | | | |
| Yes | 41.8 | 37.1 | 43.0 | 51.0 | 44.7 | 45.6 | 44.5 | 46.6 | 42.0 |
| No | 44.2 | 48.9 | 45.3 | 39.4 | 45.1 | 45.0 | 47.2 | 43.9 | 45.3 |
| Don't know | 14.0 | 14.1 | 11.8 | 9.7 | 10.2 | 9.5 | *8.3 | 9.4 | 12.7 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Type of washing machine | | | | | | | | | |
| Top loading automatic | 85.7 | 87.7 | 82.4 | 75.8 | 82.1 | 83.1 | 89.8 | 87.8 | 84.4 |
| Front loading automatic | 5.7 | 5.4 | 3.7 | 5.1 | 4.6 | 3.3 | 5.1 | 9.3 | 5.1 |
| Twin tub | 7.8 | 5.4 | 13.1 | 17.5 | 12.5 | 11.9 | 5.1 | 2.3 | 9.5 |
| Wringer | 0.5 | 0.6 | 0.4 | 1.3 | 0.6 | 0.4 | — | 0.2 | 0.6 |
| Other | 0.3 | 0.9 | 0.4 | 0.4 | 0.2 | 1.3 | — | 0.4 | 0.5 |
| Automatic washing machine with suds saver | | | | | | | | | |
| Yes | 49.3 | 43.2 | 50.7 | 59.3 | 47.2 | 51.5 | 49.2 | 51.7 | 48.6 |
| No | 42.8 | 47.1 | 42.4 | 37.0 | 46.3 | 43.8 | 44.2 | 42.3 | 43.8 |
| Don't know | 7.9 | 9.7 | 6.9 | 3.7 | 6.5 | 4.7 | 6.6 | 6.0 | 7.6 |

(a) Northern Territory data refers to mainly urban areas only.

The majority of households who had a washing machine equipped with a suds saver did not use it (67%). Of those people who had suds saver washing machines, higher proportions in South Australia (47%) and Western Australia (37%) reported actually using this feature.

## 4.9 HOUSEHOLDS WITH SUDS SAVER WASHING MACHINES, Use

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Suds saver used | 285.7 | 188.7 | 145.3 | 116.7 | 101.5 | 22.0 | *4.5 | 17.2 | 881.6 |
| Suds saver not used | 601.1 | 406.4 | 363.5 | 129.4 | 174.8 | 52.2 | 17.1 | 35.2 | 1 779.6 |
| **Total** | **886.7** | **595.1** | **508.8** | **246.1** | **276.3** | **74.2** | **21.6** | **52.3** | **2 661.2** |
| **Proportion (%)** | | | | | | | | | |
| Suds saver used | 32.2 | 31.7 | 28.6 | 47.4 | 36.7 | 29.7 | *20.7 | 32.8 | 33.1 |
| Suds saver not used | 67.8 | 68.3 | 71.4 | 52.6 | 63.3 | 70.3 | 79.3 | 67.2 | 66.9 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Suds saver used | 40.1 | 27.4 | 30.2 | 49.5 | 38.5 | 31.5 | 30.6 | 32.2 | 35.7 |
| Suds saver not used | 59.9 | 72.6 | 69.8 | 50.5 | 61.5 | 68.5 | 69.4 | 67.8 | 64.3 |

(a) Northern Territory data refers to mainly urban areas only.

### AGE OF APPLIANCES

Of the households with refrigerators, dishwashers, clothes dryers, air conditioners and washing machines, the majority of all these appliances were less than 10 years old. However, for separate freezers most were more than 10 years old.

## 4.10 HOUSEHOLDS WITH REFRIGERATORS, Age

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Less than 1 year | 165.2 | 90.9 | 93.8 | 36.3 | 58.3 | *9.4 | *9.5 | 10.3 | 473.6 |
| 1 to less than 5 years | 653.6 | 392.7 | 398.6 | 132.0 | 195.5 | 44.7 | 20.6 | 27.1 | 1 864.8 |
| 5 to less than 10 years | 596.0 | 406.2 | 374.0 | 132.8 | 184.5 | 50.9 | 12.6 | 28.3 | 1 785.2 |
| 10 or more years | 902.0 | 814.3 | 434.6 | 286.6 | 261.0 | 73.6 | *8.9 | 49.4 | 2 830.4 |
| Don't know | 58.8 | 33.5 | 27.5 | 17.0 | 14.1 | *6.7 | *0.7 | *2.7 | 161.0 |
| **Total** | **2 375.6** | **1 737.6** | **1 328.5** | **604.7** | **713.3** | **185.3** | **52.2** | **117.7** | **7 115.0** |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 7.0 | 5.2 | 7.1 | 6.0 | 8.2 | *5.1 | *18.1 | 8.7 | 6.7 |
| 1 to less than 5 years | 27.5 | 22.6 | 30.0 | 21.8 | 27.4 | 24.1 | 39.4 | 23.0 | 26.2 |
| 5 to less than 10 years | 25.1 | 23.4 | 28.2 | 22.0 | 25.9 | 27.5 | 24.1 | 24.0 | 25.1 |
| 10 or more years | 38.0 | 46.9 | 32.7 | 47.4 | 36.6 | 39.7 | *17.1 | 41.9 | 39.8 |
| Don't know | 2.5 | 1.9 | 2.1 | 2.8 | 2.0 | *3.6 | *1.3 | *2.3 | 2.3 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 7.1 | 6.4 | 7.2 | 5.4 | 6.9 | 7.2 | 8.4 | 9.1 | 6.8 |
| 1 to less than 5 years | 27.3 | 23.8 | 28.8 | 23.5 | 26.8 | 24.7 | 36.8 | 23.0 | 26.2 |
| 5 to less than 10 years | 30.2 | 27.1 | 30.6 | 27.0 | 33.4 | 30.4 | 31.9 | 30.0 | 29.5 |
| 10 or more years | 34.2 | 42.0 | 31.3 | 43.0 | 30.6 | 36.3 | 20.1 | 36.3 | 36.1 |
| Don't know | 1.2 | 0.7 | 2.0 | 1.1 | 2.3 | 1.4 | 2.8 | 1.5 | 1.4 |

(a) Northern Territory data refers to mainly urban areas only.

## 4.11 HOUSEHOLDS WITH SEPARATE FREEZERS, Age

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Less than 1 year | 25.6 | 18.1 | 18.6 | *8.2 | 14.8 | *2.6 | *2.3 | *1.1 | 91.3 |
| 1 to less than 5 years | 140.1 | 107.6 | 115.7 | 31.7 | 46.4 | 14.7 | *5.8 | *5.0 | 467.1 |
| 5 to less than 10 years | 216.2 | 144.6 | 134.8 | 46.8 | 74.0 | 25.9 | *4.9 | *7.7 | 654.9 |
| 10 or more years | 509.8 | 402.4 | 267.8 | 166.0 | 142.3 | 67.8 | *8.6 | 25.3 | 1 590.2 |
| Don't know | 18.5 | 15.8 | *8.0 | *6.6 | *4.1 | *3.9 | — | *0.3 | 57.1 |
| **Total** | **910.2** | **688.5** | **544.9** | **259.3** | **281.7** | **115.0** | **21.6** | **39.5** | **2 860.6** |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 2.8 | 2.6 | 3.4 | *3.2 | 5.3 | *2.3 | *10.6 | *2.7 | 3.2 |
| 1 to less than 5 years | 15.4 | 15.6 | 21.2 | 12.2 | 16.5 | 12.8 | *26.7 | *12.8 | 16.3 |
| 5 to less than 10 years | 23.8 | 21.0 | 24.7 | 18.0 | 26.3 | 22.6 | *22.7 | *19.5 | 22.9 |
| 10 or more years | 56.0 | 58.4 | 49.1 | 64.0 | 50.5 | 59.0 | *40.0 | 64.1 | 55.6 |
| Don't know | 2.0 | 2.3 | *1.5 | *2.5 | *1.4 | *3.4 | — | *0.8 | 2.0 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 4.0 | 3.1 | 5.2 | 3.4 | 4.3 | 3.6 | 9.4 | 4.4 | 4.0 |
| 1 to less than 5 years | 18.7 | 18.9 | 22.8 | 15.9 | 22.4 | 18.3 | 20.8 | 14.5 | 19.6 |
| 5 to less than 10 years | 30.7 | 25.9 | 28.5 | 28.6 | 33.2 | 31.4 | 39.3 | 35.5 | 29.3 |
| 10 or more years | 45.3 | 50.8 | 42.9 | 50.7 | 38.9 | 45.9 | 28.7 | 45.6 | 46.0 |
| Don't know | 1.2 | 1.4 | 0.6 | 1.3 | 1.2 | 0.8 | 1.9 | — | 1.1 |

(a) Northern Territory data refers to mainly urban areas only.

## 4.12 HOUSEHOLDS WITH DISHWASHERS, Age

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Less than 1 year | 64.6 | 52.5 | 30.7 | *7.9 | 15.8 | *1.7 | *2.2 | *4.7 | 180.1 |
| 1 to less than 5 years | 221.0 | 172.8 | 110.5 | 32.5 | 47.2 | 10.8 | *4.5 | 15.3 | 614.6 |
| 5 to less than 10 years | 193.3 | 150.0 | 116.5 | 32.4 | 37.3 | 13.7 | *1.4 | 14.6 | 559.2 |
| 10 or more years | 232.3 | 249.2 | 106.7 | 45.4 | 38.9 | 15.4 | *2.2 | 17.7 | 707.7 |
| Don't know | 33.2 | 25.7 | 16.1 | *4.4 | *4.0 | *3.2 | *0.2 | *2.1 | 88.9 |
| **Total** | **744.4** | **650.2** | **380.5** | **122.6** | **143.2** | **44.9** | **10.4** | **54.3** | **2 150.5** |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 8.7 | 8.1 | 8.1 | *6.5 | 11.0 | *3.8 | *20.7 | *8.6 | 8.4 |
| 1 to less than 5 years | 29.7 | 26.6 | 29.0 | 26.5 | 33.0 | 24.2 | *43.2 | 28.2 | 28.6 |
| 5 to less than 10 years | 26.0 | 23.1 | 30.6 | 26.4 | 26.0 | 30.5 | *13.3 | 26.9 | 26.0 |
| 10 or more years | 31.2 | 38.3 | 28.0 | 37.0 | 27.2 | 34.3 | *20.9 | 32.6 | 32.9 |
| Don't know | 4.5 | 4.0 | 4.2 | *3.6 | *2.8 | *7.2 | *2.0 | *3.8 | 4.1 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 6.7 | 6.6 | 8.8 | 8.5 | 8.6 | 6.8 | 6.1 | 9.5 | 7.3 |
| 1 to less than 5 years | 32.6 | 30.8 | 34.3 | 30.5 | 30.8 | 31.6 | 45.2 | 28.5 | 32.0 |
| 5 to less than 10 years | 32.9 | 31.3 | 30.7 | 34.5 | 33.9 | 35.1 | 37.2 | 29.9 | 32.2 |
| 10 or more years | 23.0 | 27.6 | 20.1 | 22.3 | 24.0 | 23.4 | 11.5 | 29.6 | 24.1 |
| Don't know | 4.8 | 3.6 | 6.1 | 4.2 | 2.8 | 3.1 | — | 2.4 | 4.4 |

(a) Northern Territory data refers to mainly urban areas only.

## 4.13 HOUSEHOLDS WITH CLOTHES DRYERS, Age

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Less than 1 year | 78.5 | 36.0 | 35.8 | *6.1 | 17.9 | *4.7 | *1.9 | *4.3 | 185.4 |
| 1 to less than 5 years | 278.4 | 174.3 | 167.3 | 52.2 | 71.8 | 17.4 | *5.9 | 11.4 | 778.7 |
| 5 to less than 10 years | 309.6 | 224.6 | 183.3 | 72.5 | 81.6 | 23.9 | *4.1 | 17.3 | 916.8 |
| 10 or more years | 630.2 | 501.9 | 300.9 | 157.2 | 144.5 | 55.0 | *4.3 | 32.1 | 1 826.1 |
| Don't know | 28.5 | 19.0 | 11.6 | *4.8 | *6.9 | *3.6 | *0.9 | *1.3 | 76.6 |
| **Total** | **1 325.2** | **955.8** | **699.0** | **292.8** | **322.7** | **104.6** | **17.1** | **66.3** | **3 783.7** |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 5.9 | 3.8 | 5.1 | *2.1 | 5.5 | *4.5 | *11.4 | *6.5 | 4.9 |
| 1 to less than 5 years | 21.0 | 18.2 | 23.9 | 17.8 | 22.3 | 16.6 | *34.5 | 17.3 | 20.6 |
| 5 to less than 10 years | 23.4 | 23.5 | 26.2 | 24.8 | 25.3 | 22.8 | *24.1 | 26.0 | 24.2 |
| 10 or more years | 47.6 | 52.5 | 43.0 | 53.7 | 44.8 | 52.6 | *25.0 | 48.3 | 48.3 |
| Don't know | 2.2 | 2.0 | 1.7 | *1.6 | *2.1 | *3.4 | *5.0 | *1.9 | 2.0 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 4.7 | 4.4 | 5.7 | 4.7 | 4.6 | 3.6 | 3.7 | 5.0 | 4.8 |
| 1 to less than 5 years | 24.3 | 23.5 | 24.5 | 20.0 | 24.8 | 19.2 | 29.3 | 26.9 | 23.7 |
| 5 to less than 10 years | 31.9 | 31.1 | 31.8 | 31.3 | 37.6 | 29.8 | 29.5 | 30.2 | 31.9 |
| 10 or more years | 37.4 | 39.8 | 36.8 | 42.3 | 31.2 | 44.9 | 35.7 | 37.2 | 38.1 |
| Don't know | 1.6 | 1.3 | 1.2 | 1.6 | 1.8 | 2.5 | 1.7 | 0.7 | 1.5 |

(a) Northern Territory data refers to mainly urban areas only.

## 4.14 HOUSEHOLDS WITH AIR CONDITIONERS, Age Of Main Unit

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Less than 1 year | 77.5 | 73.4 | 43.9 | 17.7 | 34.7 | *0.8 | 10.0 | *4.9 | 262.9 |
| 1 to less than 5 years | 140.0 | 157.1 | 123.8 | 71.2 | 120.3 | *2.4 | 14.2 | *4.8 | 633.9 |
| 5 to less than 10 years | 137.1 | 142.0 | 67.6 | 61.9 | 57.5 | *0.9 | *8.9 | *4.4 | 480.5 |
| 10 or more years | 243.7 | 326.6 | 69.2 | 149.9 | 87.9 | *0.6 | *8.2 | *8.0 | 894.1 |
| Don't know | 61.5 | 58.7 | 25.7 | 30.9 | 25.6 | *0.2 | *2.5 | *1.3 | 206.4 |
| **Total** | **659.8** | **757.8** | **330.3** | **331.6** | **326.1** | ***4.9** | **43.9** | **23.5** | **2 477.8** |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 11.7 | 9.7 | 13.3 | 5.3 | 10.7 | *15.5 | 22.8 | *21.0 | 10.6 |
| 1 to less than 5 years | 21.2 | 20.7 | 37.5 | 21.5 | 36.9 | *50.2 | 32.3 | *20.5 | 25.6 |
| 5 to less than 10 years | 20.8 | 18.7 | 20.5 | 18.7 | 17.6 | *19.2 | *20.4 | *18.7 | 19.4 |
| 10 or more years | 36.9 | 43.1 | 20.9 | 45.2 | 26.9 | *11.5 | *18.8 | *34.1 | 36.1 |
| Don't know | 9.3 | 7.7 | 7.8 | 9.3 | 7.9 | *3.7 | *5.8 | *5.7 | 8.3 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 6.4 | 3.5 | 9.2 | 5.8 | 6.4 | 12.2 | 8.6 | 9.1 | 5.8 |
| 1 to less than 5 years | 23.2 | 19.6 | 31.4 | 20.7 | 26.8 | 51.6 | 35.0 | 30.2 | 23.2 |
| 5 to less than 10 years | 25.3 | 29.2 | 27.0 | 24.3 | 27.8 | 21.0 | 28.6 | 23.2 | 26.7 |
| 10 or more years | 38.8 | 41.7 | 25.6 | 43.6 | 31.4 | 15.2 | 21.4 | 33.2 | 38.0 |
| Don't know | 6.2 | 6.0 | 6.8 | 5.5 | 7.6 | — | 6.4 | 4.2 | 6.2 |

(a) Northern Territory data refers to mainly urban areas only.

## 4.15 HOUSEHOLDS WITH WASHING MACHINES, Age

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Less than 1 year | 175.9 | 110.5 | 96.5 | 34.3 | 58.1 | 16.0 | *5.8 | *9.3 | 506.5 |
| 1 to less than 5 years | 693.6 | 411.4 | 389.0 | 156.9 | 195.9 | 44.9 | 19.0 | 31.7 | 1 942.5 |
| 5 to less than 10 years | 626.4 | 432.9 | 399.3 | 160.0 | 205.6 | 54.4 | 14.0 | 27.2 | 1 919.7 |
| 10 or more years | 696.1 | 669.3 | 361.5 | 213.2 | 197.7 | 60.3 | 9.9 | 41.9 | 2 249.9 |
| Don't know | 42.8 | 34.2 | 30.5 | *9.0 | 13.7 | *5.5 | *0.9 | *2.9 | 139.5 |
| **Total** | **2 234.8** | **1 658.3** | **1 276.8** | **573.4** | **671.2** | **181.1** | **49.6** | **112.9** | **6 758.0** |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 7.9 | 6.7 | 7.6 | 6.0 | 8.7 | 8.8 | *11.8 | *8.2 | 7.5 |
| 1 to less than 5 years | 31.0 | 24.8 | 30.5 | 27.4 | 29.2 | 24.8 | 38.4 | 28.1 | 28.7 |
| 5 to less than 10 years | 28.0 | 26.1 | 31.3 | 27.9 | 30.6 | 30.0 | 28.2 | 24.1 | 28.4 |
| 10 or more years | 31.1 | 40.4 | 28.3 | 37.2 | 29.5 | 33.3 | 19.9 | 37.1 | 33.3 |
| Don't know | 1.9 | 2.1 | 2.4 | *1.6 | 2.0 | *3.0 | *1.7 | *2.6 | 2.1 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Less than 1 year | 9.0 | 7.7 | 8.8 | 6.3 | 7.5 | 9.4 | 14.2 | 9.1 | 8.3 |
| 1 to less than 5 years | 29.6 | 26.1 | 31.3 | 27.7 | 31.4 | 28.6 | 34.6 | 30.3 | 29.0 |
| 5 to less than 10 years | 32.9 | 32.0 | 34.0 | 32.6 | 34.3 | 30.4 | 34.1 | 28.6 | 32.8 |
| 10 or more years | 26.9 | 32.7 | 24.1 | 31.9 | 25.3 | 29.9 | 14.0 | 30.1 | 28.2 |
| Don't know | 1.7 | 1.5 | 1.8 | 1.4 | 1.5 | 1.7 | 3.2 | 1.8 | 1.6 |

(a) Northern Territory data refers to mainly urban areas only.

### USE OF APPLIANCES

Cold water was used by the majority of households to wash their clothes (64%), followed by warm water. There has been a slight rise in the proportion of households reporting that they use cold water compared with 1994. Households in the Northern Territory had the highest proportion for using cold water for washing machines (76%), while Victorians were the most likely to use warm water (32%), and South Australians hot water (8%).

## 4.16 HOUSEHOLDS WITH WASHING MACHINES, Loads and Water Temperature

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Number of loads | | | | | | | | | |
| Less than 3 loads/week | 613.6 | 449.7 | 304.3 | 178.7 | 203.0 | 42.5 | *9.4 | 32.0 | 1 833.2 |
| 3–5 loads/week | 813.4 | 617.7 | 445.6 | 206.7 | 242.9 | 59.9 | 17.8 | 42.5 | 2 446.4 |
| 6–10 loads/week | 603.9 | 445.4 | 390.9 | 152.7 | 179.8 | 51.0 | 17.8 | 30.1 | 1 871.7 |
| 11 or more loads/week | 204.0 | 145.5 | 135.9 | 35.3 | 45.5 | 27.7 | *4.5 | *8.3 | 606.7 |
| Water temperature | | | | | | | | | |
| Cold | 1 578.6 | 889.6 | 943.0 | 305.3 | 409.5 | 115.4 | 37.5 | 72.4 | 4 351.4 |
| Warm | 457.6 | 523.9 | 245.4 | 179.7 | 179.6 | 47.1 | *8.6 | 28.4 | 1 670.2 |
| Hot | 74.2 | 84.9 | 37.4 | 45.7 | 35.6 | *7.0 | *1.1 | *4.0 | 290.0 |
| Varies | 124.4 | 159.9 | 51.0 | 42.6 | 46.4 | 11.6 | *2.4 | *8.1 | 446.4 |
| **Total** | **2 234.8** | **1 658.3** | **1 276.8** | **573.4** | **671.2** | **181.1** | **49.6** | **112.9** | **6 758.0** |
| **Proportion (%)** | | | | | | | | | |
| Number of loads | | | | | | | | | |
| Less than 3 loads/week | 27.5 | 27.1 | 23.8 | 31.2 | 30.2 | 23.5 | *19.0 | 28.3 | 27.1 |
| 3–5 loads/week | 36.4 | 37.2 | 34.9 | 36.0 | 36.2 | 33.1 | 35.8 | 37.6 | 36.2 |
| 6–10 loads/week | 27.0 | 26.9 | 30.6 | 26.6 | 26.8 | 28.1 | 36.0 | 26.7 | 27.7 |
| 11 or more loads/week | 9.1 | 8.8 | 10.6 | 6.2 | 6.8 | 15.3 | *9.2 | *7.4 | 9.0 |
| Water temperature | | | | | | | | | |
| Cold | 70.6 | 53.6 | 73.9 | 53.2 | 61.0 | 63.7 | 75.7 | 64.2 | 64.4 |
| Warm | 20.5 | 31.6 | 19.2 | 31.3 | 26.8 | 26.0 | *17.3 | 25.1 | 24.7 |
| Hot | 3.3 | 5.1 | 2.9 | 8.0 | 5.3 | *3.9 | *2.1 | *3.5 | 4.3 |
| Varies | 5.6 | 9.6 | 4.0 | 7.4 | 6.9 | 6.4 | *4.9 | *7.2 | 6.6 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Number of loads | | | | | | | | | |
| Less than 3 loads/week | 29.4 | 30.9 | 23.2 | 31.7 | 31.7 | 25.5 | 17.9 | 27.3 | 28.9 |
| 3–5 loads/week | 32.1 | 32.1 | 33.0 | 36.3 | 35.3 | 32.6 | 37.6 | 36.9 | 33.1 |
| 6–10 loads/week | 27.0 | 26.4 | 30.1 | 23.7 | 25.2 | 28.5 | 34.5 | 26.7 | 27.0 |
| 11 or more loads/week | 11.5 | 10.5 | 13.7 | 8.3 | 7.9 | 13.4 | 10.0 | 9.1 | 11.0 |
| Water temperature | | | | | | | | | |
| Cold | 69.4 | 47.5 | 73.0 | 48.1 | 59.1 | 58.6 | 70.3 | 61.1 | 61.2 |
| Warm | 21.8 | 38.2 | 20.3 | 37.0 | 27.8 | 32.4 | 21.5 | 30.5 | 28.0 |
| Hot | 4.4 | 7.0 | 3.0 | 8.7 | 7.6 | 4.8 | 3.8 | 2.5 | 5.5 |
| Varies | 4.4 | 7.3 | 3.7 | 6.2 | 5.4 | 4.2 | 4.4 | 5.8 | 5.3 |

(a) Northern Territory data refers to mainly urban areas only.

One fifth of households with dishwashers reported that they only occassionally/rarely or never used their dishwasher. Around 40% reported that they used it at least once a week, and slightly over one-third (35%) reported using it daily.

## 4.17 HOUSEHOLDS WITH DISHWASHERS, Use

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Daily | 263.7 | 201.6 | 170.3 | 37.7 | 47.0 | 16.2 | *4.9 | 20.9 | 762.3 |
| At least once a week | 298.8 | 270.5 | 131.5 | 56.1 | 56.1 | 18.2 | *4.0 | 23.7 | 858.8 |
| At least once a month | 39.2 | 41.0 | 13.7 | *5.0 | 9.9 | *1.6 | *0.4 | *2.6 | 113.3 |
| Occasionally/rarely | 80.8 | 68.6 | 34.0 | 13.0 | 14.8 | *4.8 | *0.2 | *4.4 | 220.7 |
| Never | 61.9 | 68.5 | 30.9 | 10.8 | 15.5 | *4.2 | *1.0 | *2.7 | 195.4 |
| **Total** | **744.4** | **650.2** | **380.5** | **122.6** | **143.2** | **44.9** | **10.4** | **54.3** | **2 150.5** |
| **Proportion (%)** | | | | | | | | | |
| Daily | 35.4 | 31.0 | 44.8 | 30.7 | 32.8 | 36.0 | *46.6 | 38.6 | 35.4 |
| At least once a week | 40.1 | 41.6 | 34.6 | 45.8 | 39.2 | 40.5 | *38.3 | 43.6 | 39.9 |
| At least once a month | 5.3 | 6.3 | 3.6 | *4.1 | 6.9 | *3.5 | *3.6 | *4.7 | 5.3 |
| Occasionally/rarely | 10.9 | 10.6 | 8.9 | 10.6 | 10.3 | *10.8 | *2.0 | *8.1 | 10.3 |
| Never | 8.3 | 10.5 | 8.1 | 8.8 | 10.8 | *9.3 | *9.5 | *5.0 | 9.1 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Daily | 30.0 | 33.2 | 36.9 | 25.8 | 25.4 | 38.8 | 38.9 | 30.6 | 31.9 |
| At least once a week | 44.1 | 42.8 | 35.5 | 42.2 | 42.2 | 34.4 | 30.0 | 50.0 | 41.8 |
| At least once a month | 4.3 | 5.5 | 5.6 | 5.3 | 5.0 | 4.1 | 2.4 | 5.7 | 5.1 |
| Occasionally/rarely | 21.6 | 18.4 | 22.0 | 26.7 | 27.4 | 22.8 | 28.6 | 13.7 | 21.2 |

(a) Northern Territory data refers to mainly urban areas only.

When respondents with clothes dryers were asked how frequently they used them, the largest group specified that it depended on the weather or season. This dependency was spread fairly evenly across all States and Territories, but was slightly higher for the Australian Capital Territory. One in twenty owners of clothes dryers reported never using them.

## 4.18 HOUSEHOLDS WITH CLOTHES DRYERS, Use

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(a) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| At least once a week | 223.6 | 168.1 | 152.8 | 40.8 | 37.9 | 16.4 | *3.0 | *7.3 | 650.0 |
| At least once a fortnight | 49.5 | 28.5 | 23.5 | *4.1 | *8.1 | *3.0 | *0.9 | *1.6 | 119.2 |
| At least once a month | 48.6 | 18.5 | 22.7 | *6.4 | *6.6 | *2.4 | *1.0 | *2.7 | 109.0 |
| Depends on weather/season | 521.2 | 357.1 | 262.2 | 117.7 | 133.9 | 33.2 | *7.2 | 29.9 | 1 462.5 |
| Occasionally/rarely | 424.5 | 310.5 | 208.3 | 104.3 | 121.3 | 42.9 | *4.0 | 21.6 | 1 237.4 |
| Never | 57.7 | 73.1 | 29.5 | 19.6 | 14.9 | *6.7 | *1.0 | *3.2 | 205.7 |
| **Total** | **1 325.2** | **955.8** | **699.0** | **292.8** | **322.7** | **104.6** | **17.1** | **66.3** | **3 783.7** |
| **Proportion (%)** | | | | | | | | | |
| At least once a week | 16.9 | 17.6 | 21.9 | 13.9 | 11.7 | 15.6 | *17.8 | *11.0 | 17.2 |
| At least once a fortnight | 3.7 | 3.0 | 3.4 | *1.4 | *2.5 | *2.9 | *5.0 | *2.5 | 3.1 |
| At least once a month | 3.7 | 1.9 | 3.2 | *2.2 | *2.0 | *2.3 | *5.8 | *4.1 | 2.9 |
| Depends on weather/season | 39.3 | 37.4 | 37.5 | 40.2 | 41.5 | 31.8 | *42.1 | 45.1 | 38.7 |
| Occasionally/rarely | 32.0 | 32.5 | 29.8 | 35.6 | 37.6 | 41.0 | *23.2 | 32.5 | 32.7 |
| Never | 4.4 | 7.6 | 4.2 | 6.7 | 4.6 | *6.4 | *6.1 | *4.8 | 5.4 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| At least once a fortnight | 21.3 | 30.5 | 22.4 | 20.6 | 16.6 | 29.6 | 14.4 | 25.5 | 23.9 |
| At least once a month | 5.3 | 4.8 | 3.3 | 3.2 | 2.3 | 3.8 | 2.9 | 7.2 | 4.4 |
| Depends on weather/season | 38.1 | 30.0 | 39.7 | 39.2 | 39.1 | 27.3 | 43.0 | 32.2 | 35.9 |
| Occasionally/rarely | 35.3 | 34.7 | 34.7 | 37.0 | 42.1 | 39.3 | 39.7 | 35.1 | 35.8 |

(a) Northern Territory data refers to mainly urban areas only.

### FACTORS IN APPLIANCE CHOICE

Of the appliances bought or replaced by the household in the 12 months prior to the survey, cost was the major consideration (49%), followed by how much energy the appliance used (34%). Environmental considerations were nominated by 8% of households.

Energy efficiency rated highest amongst households in the Australian Capital Territory and the Northern Territory (with 49% and 46%, respectively, as a consideration in replacing/buying appliances). Environmental considerations were also highest for the Australian Capital Territory (9%), and lowest for the Northern Territory (5%) when replacing/purchasing appliances.

## 4.19 HOUSEHOLDS WHO REPLACED/BOUGHT APPLIANCES, Factors(a)

| | NSW | Vic. | Qld | SA | WA | Tas. | NT(b) | ACT | Aust. |
|---|---|---|---|---|---|---|---|---|---|
| | | | | MARCH 1999 | | | | | |
| **Number ('000)** | | | | | | | | | |
| Cost | 310.2 | 190.6 | 164.4 | 61.2 | 91.2 | 19.2 | *9.2 | 17.3 | 863.1 |
| Features | 150.1 | 104.4 | 92.0 | 34.1 | 43.1 | 13.5 | *3.6 | 11.5 | 452.3 |
| Energy star rating | 195.2 | 130.7 | 116.3 | 48.3 | 62.8 | 10.6 | *8.2 | 16.5 | 588.7 |
| Brand name | 120.0 | 73.7 | 69.6 | 21.9 | 33.4 | *6.5 | *3.3 | *6.2 | 334.6 |
| Appearance | 44.4 | 44.7 | 21.6 | *7.0 | 12.4 | *4.6 | *2.1 | *2.4 | 139.1 |
| Environmental considerations | 48.0 | 22.1 | 27.2 | 11.7 | 16.4 | *3.0 | *0.9 | *3.0 | 132.3 |
| Reliability | 98.7 | 81.7 | 54.9 | 18.3 | 28.3 | *8.4 | *2.3 | *5.8 | 298.5 |
| Serviceability | 53.8 | 35.1 | 28.0 | 11.3 | 10.0 | *4.2 | *1.0 | *1.3 | 144.7 |
| Availability | 29.1 | 14.2 | 18.4 | *5.1 | 10.0 | *1.8 | *1.0 | *0.7 | 80.4 |
| Dimensions | 136.4 | 84.9 | 64.1 | 22.9 | 37.1 | 9.7 | *4.8 | *5.3 | 365.2 |
| Capacity | 141.4 | 96.3 | 81.5 | 21.7 | 52.5 | 10.8 | *6.0 | *8.1 | 418.3 |
| Other | 56.9 | 47.0 | 31.6 | 15.4 | 19.7 | *6.1 | *1.5 | *4.6 | 182.8 |
| None | 14.8 | 12.7 | *8.7 | *3.8 | *7.0 | *1.5 | *0.4 | *0.2 | 49.2 |
| Don't know | 28.5 | 19.5 | *6.5 | 10.9 | 12.2 | *0.6 | *1.2 | *0.5 | 79.8 |
| **Total (b)** | **592.8** | **408.5** | **322.3** | **140.6** | **194.4** | **42.3** | **18.0** | **33.7** | **1 752.6** |
| **Proportion (%)** | | | | | | | | | |
| Cost | 52.3 | 46.6 | 51.0 | 43.5 | 46.9 | 45.3 | *50.8 | 51.3 | 49.2 |
| Features | 25.3 | 25.6 | 28.6 | 24.3 | 22.2 | 31.9 | *20.0 | 34.2 | 25.8 |
| Energy star rating | 32.9 | 32.0 | 36.1 | 34.4 | 32.3 | 25.1 | *45.5 | 49.0 | 33.6 |
| Brand name | 20.2 | 18.0 | 21.6 | 15.6 | 17.2 | *15.5 | *18.1 | *18.4 | 19.1 |
| Appearance | 7.5 | 10.9 | 6.7 | *5.0 | 6.4 | *10.8 | *11.5 | *7.1 | 7.9 |
| Environmental considerations | 8.1 | 5.4 | 8.4 | 8.3 | 8.5 | *7.0 | *4.7 | *8.9 | 7.6 |
| Reliability | 16.6 | 20.0 | 17.0 | 13.0 | 14.6 | *20.0 | *12.9 | *17.3 | 17.0 |
| Serviceability | 9.1 | 8.6 | 8.7 | 8.0 | 5.1 | *9.8 | *5.5 | *4.0 | 8.3 |
| Availability | 4.9 | 3.5 | 5.7 | *3.6 | 5.1 | *4.3 | *5.8 | *2.1 | 4.6 |
| Dimensions | 23.0 | 20.8 | 19.9 | 16.3 | 19.1 | 23.0 | *26.4 | *15.8 | 20.8 |
| Capacity | 23.9 | 23.6 | 25.3 | 15.4 | 27.0 | 25.6 | *33.4 | *24.0 | 23.9 |
| Other | 9.6 | 11.5 | 9.8 | 10.9 | 10.1 | *14.4 | *8.3 | *13.5 | 10.4 |
| None | 2.5 | 3.1 | *2.7 | *2.7 | *3.6 | *3.6 | *2.2 | *0.7 | 2.8 |
| Don't know | 4.8 | 4.8 | *2.0 | 7.8 | 6.3 | *1.4 | *6.8 | *1.4 | 4.6 |
| | | | | JUNE 1994 | | | | | |
| **Proportion (%)** | | | | | | | | | |
| Cost | 51.7 | 44.8 | 53.6 | 49.3 | 46.8 | 47.7 | 56.9 | 53.6 | 49.7 |
| Features | 39.1 | 41.3 | 45.5 | 43.3 | 39.2 | 42.0 | 42.1 | 50.4 | 41.5 |
| Energy star rating | 39.2 | 37.7 | 31.3 | 37.7 | 32.6 | 35.7 | 27.2 | 47.2 | 36.5 |
| Brand name | 19.7 | 18.1 | 20.5 | 16.9 | 13.9 | 16.4 | 13.2 | 16.3 | 18.4 |
| Appearance | 10.0 | 9.4 | 5.4 | 8.7 | 6.0 | 11.8 | 10.9 | 7.6 | 8.5 |
| Other | 23.2 | 23.3 | 18.4 | 20.3 | 27.6 | 19.2 | 23.9 | 23.1 | 22.4 |

(a) Totals do not equal the sum of items in each column because more than one factor may be specified.

(b) Northern Territory data refers to mainly urban areas only.

# EXPLANATORY NOTES

## INTRODUCTION

**1** This publication presents results from two Australian Bureau of Statistics (ABS) surveys: a supplementary survey run in association with the March 1999 Monthly Population Survey, and information obtained from the Population Survey Monitor (PSM).

## METHODOLOGY

**2** As two different ABS surveys were used to obtain data, the methodology of each survey is presented below.

**3** The timing for each survey was different. The Monthly Population Survey population relates to March 1999, while the PSM population relates to the collated survey quarters of the PSM survey, which were November 1998, February 1999, May 1999, and August 1999.

### Monthly Population Survey

**4** The Monthly Population Survey is based on a multi-stage area sample of private dwellings (approximately 31,000 houses, flats, etc.) and a list sample of non-private dwellings (hotels, motels, etc.). The proportion of Australian dwellings selected this way is approximately 0.5%. For this survey, half the private dwelling sample (i.e. 15,500 dwellings) was used. Information was obtained by personal interviews from responsible adult members of selected households, whose next birthday was closest to the date of the interview. Their views were representative of the entire household. The information obtained related to the week before the interview (i.e. the reference week).

### Population Survey Monitor

**5** The Population Survey Monitor is a quarterly household survey of approximately 4,000 households conducted throughout Australia. Each survey asks a set of questions of each usual resident aged 18 years and over within the selected household. For the data in this publication, questions were asked of the person whose birthday was closest to the date of the interview, and sought their personal opinion regarding environmental concerns and problems. The information related to the last week of the survey month.

**6** This sample is generally sufficient to provide quarterly data for Australia and annual data for the States and Territories at an acceptable level of accuracy and reliability after allowing for sample loss through factors such as vacant dwellings inadvertently selected in the sample, non-contacts, persons out of scope, etc.

## SCOPE

**7** The surveys covered rural and urban areas across all States and Territories of Australia, however the Northern Territory data refers to mainly urban areas only. Also excluded were some 175,000 persons living in remote and sparsely settled parts of Australia. The exclusion of these persons will have only a minor impact on any aggregate estimates that are produced for individual States and Territories, with the exception of the Northern Territory where such persons account for over 20% of the population.

Persons aged 18 years and over who were usual residents of private dwellings were included in the surveys except:

- members of the Australian permanent defence forces;
- certain diplomatic personnel of overseas governments, customarily excluded from censuses and surveys;
- overseas residents in Australia;
- members of non-Australian defence forces (and their dependents) stationed in Australia; and
- residents of other non-private dwellings such as hospitals, motels and gaols.

## COVERAGE

**8** Coverage rules were applied which aimed to ensure that each person was associated with only one dwelling, and hence had only one chance of selection in each survey.

## DATA COMPARABILITY

**9** A core set of data has been collected in 1992, 1994, 1996, 1998, and 1999 and will be collected on an annual basis. This core data appears in chapter 1. A set of changing topics rotate over a period of three years. The topics contained in this publication compare with data collected in June 1994. Where applicable the data has been included in this publication for comparison purposes.

## RELIABILITY OF ESTIMATES

**10** The two types of error possible in an estimate based on a sample survey are:

- Non-sampling error which arises from inaccuracies in collecting, recording and processing the data. The most significant of these errors are:
  - misreporting of data items
  - deficiencies in coverage
  - non-response
  - processing errors

  Every effort is made to minimise these errors by the careful design of questionnaires, intensive training and supervision of interviewers and efficient data processing procedures.
- Sampling error which occurs because a sample, rather than the entire population is surveyed. One measure of the likely difference resulting from not including all persons in the survey is given by the standard error (please consult the Technical Notes).

## RELATED PUBLICATIONS

**11** Users may also wish to refer to the following publications:

*Environmental Issues:People's Views and Practices* (Cat. no. 4602.0)—1992, 1994, 1996 and 1998 issues.

Current publications produced by the ABS are listed in the *Catalogue of Publications and Products* (Cat. no. 1101.0). The ABS also issues, on Tuesdays and Fridays, a *Release Advice* (Cat. no. 1105.0) which lists publications to be released in the next few days. The Catalogue and the Release Advice are available from any ABS office.

## ATTITUDINAL SURVEYS

**12** Staff within the methodology area of the ABS have recently undertaken a general review of attitudinal data collected by this organisation. The main focus of the work was to develop guidelines for asking attitudinal questions. In relation to the data collected about the environment, this relates specifically to data presented in Chapter 1 of this publication.

The major issue of concern was that respondent answers appear to be somewhat unstable, with 57 percent of respondents changing their concerns about the environment over a four week period. This reflects the fact that not all respondents have strong, consistent views in relation to what is their major environmental concern.

Further investigations will occur in the next 12 months to determine if the data can be collected in a different way, so that the ABS can be more confident of resultant information. This information will not be collected for the next year to allow investigations to occur.

Users comments on this possible future direction for this environmental statistical collection are welcome, and should be sent to The Director, Environment and Energy Statistics Section, Australian Bureau of Statistics, P.O. Box 10, Belconnen, A.C.T., 2616.

## SAMPLING VARIABILITY

**1** As the estimates in this publication are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability, that is, the estimates may differ from those that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard errors (SEs) (see tables T1 and T2), which estimate the extent to which an estimate might have varied by chance because only a sample of dwellings was included. There are about two chances in three (67%) that a sample estimate will vary by less than one SE from the number that would have been obtained if all dwellings had been included, and about 19 chances in 20 (95%) that the difference will be less than two SEs.

**2** Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the estimate. The RSE is a useful measure in that it provides an immediate indication of the percentage of errors likely to have occurred due to sampling.

**3** Particular care should be taken when comparing figures. It is not correct to assume that an apparent difference between figures is actually significant. Such an estimate is subject to sampling error. An approximate SE of the difference between two estimates (x–y) may be calculated by the following formula:

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

While this formula will only be exact for differences between separate and uncorrelated characteristics of sub-populations, it is expected to provide a good approximation for all differences likely to be of interest in this publication.

**4** As the tables of SEs show, the size of the SE increases with the size of the estimate. However, the smaller the estimate the higher the RSE. Thus, large estimates will be relatively more reliable than smaller estimates.

**5** Very small estimates are subject to large RSEs, so that their value for most practical purposes is unreliable. In the tables in this publication, only estimates with RSEs of 25% or less are considered reliable for most purposes. Estimates and percentages with RSEs between 25% and 50% are preceded by an asterix (*) to indicate that they are subject to high SEs and should be used with caution. Estimates with RSEs greater than 50% are considered too unreliable for general use and should only be used to aggregate with other estimates to provide derived estimates with RSEs of less than 25%.

**6** This publication contains estimates derived from two different surveys. Total population numbers will be slightly different and SEs vary between the surveys. Table T1 gives SEs for estimates derived from the Monthly Population Survey, while SEs for estimates derived from the Population Survey Monitor are presented in T2. Tables derived from the Monthly Population Survey are labled as being for March 1999. Tables derived from the Population Survey Monitor are labled as being for 1999.

**T1** Standard errors for estimates dervived from the Monthly Population Survey

| | | | | | | | | | | RSE |
|---|---|---|---|---|---|---|---|---|---|---|
| | *NSW* | *Vic.* | *Qld.* | *SA* | *WA* | *Tas.* | *NT* | *ACT* | *Aust.* | *Aust.* |
| *Size of Estimate* | no. | no. | no. | no. | no. | no. | no. | no. | no. | % |
| 100 | . . | . . | . . | . . | . . | 150 | 140 | . . | 110 | 110.0 |
| 200 | . . | . . | . . | . . | . . | 200 | 180 | 220 | 190 | 95.0 |
| 300 | 310 | 320 | . . | 350 | 360 | 230 | 220 | 250 | 260 | 86.7 |
| 500 | 450 | 450 | 550 | 440 | 460 | 290 | 270 | 300 | 380 | 76.0 |
| 700 | 570 | 560 | 650 | 500 | 540 | 330 | 310 | 330 | 480 | 68.6 |
| 1 000 | 730 | 700 | 760 | 580 | 630 | 380 | 350 | 380 | 620 | 62.0 |
| 1 500 | 950 | 880 | 920 | 690 | 760 | 450 | 420 | 430 | 810 | 54.0 |
| 2 000 | 1 130 | 1 040 | 1 050 | 780 | 860 | 500 | 470 | 480 | 970 | 48.5 |
| 2 500 | 1 300 | 1 200 | 1 150 | 850 | 950 | 550 | 500 | 500 | 1 100 | 44.0 |
| 3 000 | 1 450 | 1 300 | 1 250 | 900 | 1 000 | 600 | 550 | 550 | 1 250 | 41.7 |
| 3 500 | 1 550 | 1 400 | 1 350 | 1 000 | 1 100 | 650 | 600 | 600 | 1 350 | 38.6 |
| 4 000 | 1 700 | 1 500 | 1 450 | 1 050 | 1 150 | 650 | 600 | 600 | 1 450 | 36.3 |
| 5 000 | 1 900 | 1 700 | 1 600 | 1 150 | 1 250 | 750 | 650 | 650 | 1 650 | 33.0 |
| 7 000 | 2 300 | 2 000 | 1 850 | 1 300 | 1 450 | 850 | 750 | 750 | 2 000 | 28.6 |
| 10 000 | 2 700 | 2 350 | 2 150 | 1 500 | 1 700 | 950 | 850 | 900 | 2 450 | 24.5 |
| 15 000 | 3 250 | 2 800 | 2 550 | 1 800 | 1 950 | 1 100 | 1 000 | 1 050 | 3 000 | 20.0 |
| 20 000 | 3 700 | 3 150 | 2 900 | 2 000 | 2 200 | 1 250 | 1 100 | 1 150 | 3 450 | 17.3 |
| 30 000 | 4 350 | 3 650 | 3 400 | 2 350 | 2 600 | 1 450 | 1 300 | 1 350 | 4 150 | 13.8 |
| 40 000 | 4 850 | 4 050 | 3 850 | 2 650 | 2 900 | 1 650 | 1 450 | 1 550 | 4 700 | 11.8 |
| 50 000 | 5 250 | 4 400 | 4 250 | 2 900 | 3 150 | 1 750 | 1 550 | 1 700 | 5 150 | 10.3 |
| 100 000 | 6 550 | 5 550 | 5 650 | 3 800 | 4 050 | 2 300 | 2 000 | 2 300 | 6 700 | 6.7 |
| 150 000 | 7 400 | 6 450 | 6 650 | 4 500 | 4 650 | 2 650 | 2 300 | 2 750 | 7 800 | 5.2 |
| 200 000 | 8 150 | 7 200 | 7 500 | 5 050 | 5 150 | 2 950 | 2 550 | 3 150 | 8 650 | 4.3 |
| 300 000 | 9 500 | 8 500 | 8 800 | 5 900 | 5 900 | 3 450 | . . | 3 800 | 10 100 | 3.4 |
| 500 000 | 11 800 | 10 700 | 10 800 | 7 200 | 7 000 | 4 150 | . . | . . | 12 250 | 2.5 |
| 1 000 000 | 16 500 | 15 000 | 14 150 | 9 450 | 8 700 | . . | . . | . . | 16 100 | 1.6 |
| 2 000 000 | 24 250 | 21 800 | 18 450 | 12 400 | 10 800 | . . | . . | . . | 21 250 | 1.1 |
| 5 000 000 | 43 450 | 37 500 | 26 000 | . . | . . | . . | . . | . . | 32 550 | 0.7 |
| 10 000 000 | . . | . . | . . | . . | . . | . . | . . | . . | 57 050 | 0.6 |

**T2** Standard errors for estimates derived from the Population Survey Monitor

| | PERSONS 18 YEARS AND OVER.. | |
|---|---|---|
| *Size of estimate* | *SE* | *RSE* |
| | | % |
| 5 000 | . . | . . |
| 10 000 | 3 600 | 35.1 |
| 20 000 | 5 300 | 26.2 |
| 50 000 | 8 500 | 17.0 |
| 100 000 | 11 900 | 11.9 |
| 200 000 | 16 200 | 8.1 |
| 500 000 | 23 300 | 4.7 |
| 800 000 | 27 600 | 3.5 |
| 1 000 000 | 29 800 | 3.0 |
| 1 500 000 | 33 900 | 2.3 |
| 2 000 000 | 36 900 | 1.9 |

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*POST* Client Services, ABS, PO Box 10, Belconnen ACT 2616

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2460200003993
ISSN 1324-9029

**RRP $20.00**



Produced by the Australian Bureau of Statistics