

DOMESTIC WATER AND ENERGY USE, NEW SOUTH WALES AUSTRALIA

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INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070.

NOTES

ABOUT THIS PUBLICATION

This publication summarises results from the 'Domestic Water and Energy Use' survey, conducted during October 2006 throughout New South Wales. It presents information on household use of selected water and energy using appliances. Information is collected on cooling and heating devices; washing machines and clothes dryers; showers and swimming pools and outdoor spas.

ABOUT THIS SURVEY

This survey was conducted as a supplement to the ABS Monthly Population Survey. Please refer to the Explanatory Notes at the back of this publication for further details about this survey.

ABBREVIATIONS

ABS Australian Bureau of Statistics

ARA any responsible adult

ASGC Australian Standard Geographical Classification

MPS Monthly Population Survey

NSW New South Wales

RSE relative standard error

SE standard error

SR statistical region

Ian Ewing

Regional Director, New South Wales

SUMMARY OF FINDINGS

ENERGY AND WATER USE IN NSW

In October 2006 there were an estimated 2,666,800 NSW households. Electricity was the most common energy source used by NSW households to power home heating and cooling systems. An estimated 1,372,600 or 52% of households used reverse cycle air-conditioning or other electric heating to heat their homes. An estimated 1,321,600 or 50% of NSW households used either ducted, split system or portable air-conditioning to cool their homes.

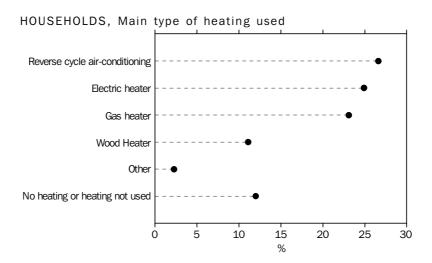
An estimated 1,530,300 or 57% of NSW households have one shower in their dwelling compared to an estimated 227,300 or 9% of households that have 3 or more showers. Front loading washing machines are used by an estimated 381,900 or 14% of NSW households compared to an estimated 2,103,100 or 79% who use a top loading machine.

MAIN TYPE OF HEATING USED BY HOUSEHOLDS

An estimated 27% of NSW households used reverse cycle air conditioning as the main type of heating, 25% used other types of electric heating and 23% used gas heating.

Wood heating was used by 11% of NSW households as the main type of heating, with the greater proportion of those being outside Sydney in the Balance of NSW.

Households living in separate houses were the greatest users of reverse cycle air-conditioning, whereas households living in flats, units or apartments more frequently used other types of electric heating.



MAIN TYPE OF COOLING USED BY HOUSEHOLDS

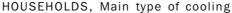
In NSW air-conditioning was the most common main form of home cooling, and was used by approximately half of all NSW households. An estimated 21% of these households used split system air-conditioning, an estimated 17% used portable or set in the wall air-conditioners, and an estimated 12% of households used ducted air-conditioning. Over 30% of NSW households used a fan as their main type of home cooling.

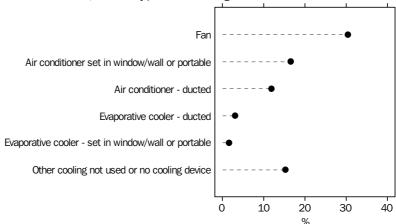
Split system or ducted air conditioning were the preferred main type of home cooling used by households living in larger homes of 3-4 bedrooms.

Fans were the preferred method of home cooling used by households living in flats, units or apartments.

Evaporative cooling was used predominately outside Sydney in the Balance of NSW.

MAIN TYPE OF COOLING USED BY HOUSEHOLDS continued





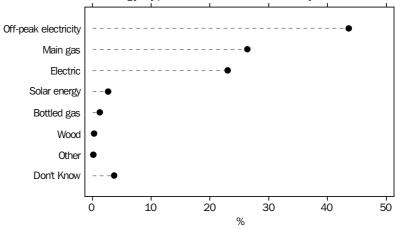
ENERGY USE FOR HOT WATER SYSTEMS

The most common energy type for hot water systems in NSW was off-peak electricity at 44% of households. An estimated 26% of households used mains gas to heat hot water.

Separate houses were more likely to use off-peak electric hot water heating at 52%. The majority of households living in flats, units or apartments used other forms of electric hot water heating.

Solar energy was used by 3% of all NSW households to heat hot water.

HOUSEHOLDS, Energy type used for hot water system



DOMESTIC INDOOR WATER USE

The number of showers inside a dwelling and the number of loads of washing done per week by households is an indicator of household water usage.

The majority (57%) of households in NSW have only one shower. There were an estimated 9% of households with 3 or more showers.

Front loading washing machines are the most water efficient type of machine, and are used by 14% of all NSW households.

Approximately 79% of NSW households use top loading machines. Although twin tub machines are used by a small proportion (2%) of NSW households, most of these machines are used in areas in the Balance of NSW.

SUMMARY OF FINDINGS continued

DOMESTIC INDOOR
WATER USE continued

Cold water is used for 71% of washing machine loads done by NSW households. Warm water accounts for 17% of washing loads, while about 2% of washing loads are done in hot water.

An estimated 65% of NSW households do 1 to 5 loads of washing per week, compared to an estimated 12% that wash 9 loads or more per week.

CLOTHES DRYING HABITS

The majority of households in NSW used a private or shared outdoor clothes line. An estimated 94% of households living in separate houses use a private outdoor clothes line.

An estimated 1,611,300 households in NSW used an electric clothes dryer. An estimated 29% of households used their electric clothes dryer once per week, while 37% used it less than once per month. Approximately 46% of households living in flats, units or apartments used an electric clothes dryer, and used it at least once per week. Approximately 42% of households living in separate houses used their electric clothes dryer less than once per month. An estimated 14% of NSW households that have a clothes dryer, reported that they never used their clothes dryer.

SWIMMING POOL OWNERSHIP AND MAINTENANCE

An estimated 361,100 or 14% of households in NSW have either a swimming pool and/or a spa. A higher proportion of households in Sydney have either a pool or spa compared with the Balance of NSW.

An estimated 70,700 or 20% of swimming pool and/or spa owners have a pool cover. An estimated 57% of these households, regularly cover their pool in the warmest months. During the coolest months, an estimated 76% of pool owners with a pool cover, reported that they would always cover their pool.

During the warmer months the majority of NSW households with a swimming pool reported using a pool filter to clean their pools for between 3 and 11 hours per day.

		Balance of	
	Sydney	New South Wales	Total
• • • • • • • • • • • • • • • • • • • •	• • • • • •	• • • • • • • • • • • •	• • • • • • • • • •
Main type of heating used			
Electric	963.9	408.7	1 372.6
Gas	423.8	486.9	910.8
Other(a)	36.1	26.0	62.1
Heating not used or no heating	212.3	109.0	321.3
Total	1 636.2	1 030.6	2 666.8
Main type of cooling used			
Air conditioner	834.0	487.6	1 321.6
Evaporative cooler	15.9	110.3	126.2
Fan	522.1	288.1	810.2
Other, cooling not used or no cooling device(b)	264.1	144.6	408.7
Total	1 636.2	1 030.6	2 666.8
Energy type for hot water system			
Electric	989.5	768.3	1 757.8
Gas	557.8	180.7	738.5
Solar energy	30.7	41.3	72.0
Other or don't know(c)	64.1	46.9	111.0
Total	1 636.2	1 030.6	2 666.8
Washing machine used			
Top loading	1 276.0	827.1	2 103.1
Front loading	252.0	129.9	381.9
Twin tub	*8.2	38.6	46.9
Not applicable, other or don't know(d)	100.0	35.0	134.9
Total	1 636.2	1 030.6	2 666.8
Number of showers			
1 shower	888.9	641.4	1 530.3
2 showers	581.9	317.1	899.0
3 showers or more	159.0	68.4	227.3
Not applicable(e)	*6.4	*3.7	10.1
Total	1 636.2	1 030.6	2 666.8
Households with a swimming pool			
Swimming pool	225.7	104.1	329.8
Outdoor spa	31.7	17.0	48.7
Total	244.1	117.0	361.1

^{*} estimate has a relative standard error of 25% to 50% and should be used with caution

⁽a) Includes a small number of households with other heating devices.

⁽b) Includes a small number of households with other cooling devices.

⁽c) Includes a small number of households with other hot water systems types.

⁽d) Includes a small number of households with other washing machine types.

⁽e) Includes a small number of households with no shower.

	Reverse cycle air-conditioning	Electric heater	Gas heater	Wood	Other(a)	No heating or heating not used	Total
• • • • • • • • • • • • • • • • • • • •	• • • • • • • • • •	• • • • • • • •	• • • • • • •	• • • • • • •	• • • • • •	• • • • • • •	• • • • • • •
		NUMBER	('000')				
Region of usual residence							
Sydney	475.7	488.2	350.5	73.3	36.1	212.3	1 636.2
Balance of New South Wales	233.7	175.0	265.4	221.6	26.0	109.0	1 030.6
Total	709.4	663.2	615.9	294.9	62.1	321.3	2 666.8
Dwelling type							
Separate house	588.7	323.3	523.4	290.7	40.2	135.7	1 902.1
Semi-detached	56.2	85.7	55.2	*np	*np	38.3	246.1
Flat/unit/apartment(b)	64.5	254.2	37.3	**np	np	147.3	518.6
Total	709.4	663.2	615.9	294.9	62.1	321.3	2 666.8
Number of bedrooms							
0–2 Bedrooms	108.2	325.3	107.8	37.0	22.4	155.8	756.5
3–4 Bedrooms	553.6	316.0	471.2	233.9	37.3	147.1	1 759.0
5 or more Bedrooms	47.5	22.0	36.8	24.0	*2.4	18.4	151.2
Total	709.4	663.2	615.9	294.9	62.1	321.3	2 666.8
	P	PERCENTA	GE (%)				
Region of usual residence							
Sydney	29.1	29.8	21.4	4.5	2.2	13.0	100.0
Balance of New South Wales	22.7	17.0	25.8	21.5	2.5	10.6	100.0
Total	26.6	24.9	23.1	11.1	2.3	12.0	100.0
Dwelling type							
Separate house	31.0	17.0	27.5	15.3	2.1	7.1	100.0
Semi-detached	22.8	34.8	22.4	*np	*np	15.5	100.0
Flat/unit/apartment(b)	12.4	49.0	7.2	**np	np	28.4	100.0
Total	26.6	24.9	23.1	11.1	2.3	12.0	100.0
Number of bedrooms							
0–2 Bedrooms	14.3	43.0	14.3	4.9	3.0	20.6	100.0
3-4 Bedrooms	31.5	18.0	26.8	13.3	2.1	8.4	100.0
5 or more Bedrooms	31.4	14.5	24.4	15.9	*1.6	12.2	100.0
Total	26.6	24.9	23.1	11.1	2.3	12.0	100.0

estimate has a relative standard error of 25% to 50% and should be used with caution

 $^{^{\}star\star}$ $\,\,$ estimate has a relative standard error greater than 50% and is considered too unreliable for general use

np not available for publication but included in totals where applicable, unless otherwise indicated

⁽a) Includes a small number of households with other heating types.

⁽b) Includes a small number of households living in other dwelling types.

	AIR CONDIT	TIONER		EVAPORATIV	/E COOLER		Other cooling,	
	Split system	Ducted	Set in window/wall or portable	Ducted	Set in window/wall or portable	ı	ooling not used or no cooling device(a)	Total
			NUMBER ('C	000)				
Region of usual residence								
Sydney	319.3	242.5	272.2	_	15.9	522.1	264.1	1 636.2
Balance of New South Wales	241.5	75.0	171.1	83.7	26.6	288.1	144.6	1 030.6
Total	560.8	317.5	443.3	83.7	42.4	810.2	408.7	2 666.8
Dwelling type								
Separate house	482.9	264.4	368.4	79.5	30.1	477.2	199.5	1 902.1
Semi-detached	45.2	14.9	33.7	*2.4	*4.6	94.5	50.7	246.1
Flat/unit/apartment(b)	32.7	38.2	41.2	*1.9	*7.7	238.5	158.5	518.6
Total	560.8	317.5	443.3	83.7	42.4	810.2	408.7	2 666.8
Normalis are of the days are a								
Number of bedrooms	74.0	27.2	102.7	+7.4	4.4 E	220.0	100.0	756 F
0–2 bedrooms	74.9	37.3	103.7	*7.4	14.5	329.8	189.0	756.5
3–4 bedrooms 5 or more bedrooms	460.5 25.5	242.6 37.6	322.3 17.3	71.0 *5.3	25.6 *2.3	440.5 39.9	196.5 23.3	1 759.0 151.2
5 of more bedrooms	23.3	37.0	17.5		2.3	39.9	23.3	131.2
Total	560.8	317.5	443.3	83.7	42.4	810.2	408.7	2 666.8
• • • • • • • • • • • • • • • • • • • •			• • • • • • • • • • • •	• • • • • • • • •			• • • • • •	
			PERCENTAGE	Ε (%)				
Region of usual residence								
Sydney	19.5	14.8	16.6	_	1.0	31.9	16.1	100.0
Balance of New South Wales	23.4	7.3	16.6	8.1	2.6	28.0	14.0	100.0
Total	21.0	11.9	16.6	3.1	1.6	30.4	15.3	100.0
Dwelling type								
Separate house	25.4	13.9	19.4	4.2	1.6	25.1	10.5	100.0
Semi-detached	18.4	6.1	13.7	*1.0	*1.9	38.4	20.6	100.0
Flat/unit/apartment(b)	6.3	7.4	7.9	*0.4	*1.5	46.0	30.6	100.0
Total	21.0	11.9	16.6	3.1	1.6	30.4	15.3	100.0
Number of bedrooms								
0–2 bedrooms	9.9	4.9	13.7	*1.0	1.9	43.6	25.0	100.0
3–4 bedrooms	26.2	13.8	18.3	4.0	1.5	25.0	11.2	100.0
5 or more bedrooms	16.8	24.9	11.5	*3.5	*1.5	26.4	15.4	100.0
Total	21.0	11.9	16.6	3.1	1.6	30.4	15.3	100.0

estimate has a relative standard error of 25% to 50% and should be used with caution

nil or rounded to zero (including null cells)

⁽a) Includes a small number of households with other cooling types.

⁽b) Includes a small number of households living in other dwelling types.



HOUSEHOLDS, Energy type used for hot water system(a)

	ELECTRIC		GAS					
							Other	
	e	Off-peak	Mains	Bottled	147 7	Solar	and don't	.
	Electricity	electricity	gas	gas	Wood	energy	know(b)	Total
• • • • • • • • • • • • • • • • • • • •	• • • • • • • • •	N U M E	BER ('000)	• • • • • • •	• • • • •	• • • • • • •	• • • • • • •
Region of usual residence								
Sydney	461.3	545.3	550.3	*7.5	_	30.7	64.1	1 636.2
Balance of New South Wales	152.5	617.1	153.1	27.6	*7.4	41.3	39.5	1 030.6
Total	613.8	1 162.4	703.4	35.1	*7.4	72.0	103.6	2 666.8
Dwelling type								
Separate house	317.7	997.3	477.2	33.1	*7.4	68.6	27.6	1 902.1
Semi-detached	66.8	81.1	88.8	np	_	*np	9.8	246.1
Flat/unit/apartment(c)	229.3	84.1	137.4	*np	_	**np	66.3	518.6
Total	613.8	1 162.4	703.4	35.1	*7.4	72.0	103.6	2 666.8
Number of bedrooms								
0–2 bedrooms	294.2	206.4	182.5	np	**np	10.7	57.7	756.5
3–4 bedrooms	295.0	887.1	481.5	np	*np	52.8	34.3	1 759.0
5 or more bedrooms	24.6	69.0	39.4	*2.4	_	*8.5	11.6	151.2
Total	613.8	1 162.4	703.4	35.1	*7.4	72.0	103.6	2 666.8
• • • • • • • • • • • • • • • • • • • •		• • • • • • • • • •		• • • • • • • •				• • • • • • •
		PERCE	ENTAGE (9	6)				
Region of usual residence								
Sydney	28.2	33.3	33.6	*0.5	_	1.9	3.9	100.0
Balance of New South Wales	14.8	59.9	14.9	2.7	*0.7	4.0	3.8	100.0
Total	23.0	43.6	26.4	1.3	*0.3	2.7	3.9	100.0
Dwelling type								
Separate house	16.7	52.4	25.1	1.7	*0.4	3.6	1.4	100.0
Semi-detached	27.1	33.0	36.1	np	_	*np	4.0	100.0
Flat/unit/apartment(c)	44.2	16.2	26.5	*np	_	**np	12.8	100.0
Total	23.0	43.6	26.4	1.3	*0.3	2.7	3.9	100.0
Number of bedrooms								
0–2 bedrooms	38.9	27.3	24.1	np	**np	1.4	7.6	100.0
3-4 bedrooms	16.8	50.4	27.4	np	*np	3.0	1.9	100.0
5 or more bedrooms	16.3	45.6	26.1	*1.6	_	*5.6	7.7	100.0
Total	23.0	43.6	26.4	1.3	*0.3	2.7	3.9	100.0

estimate has a relative standard error of 25% to 50% and should be used with caution

^{**} estimate has a relative standard error greater than 50% and is considered too unreliable for general use

nil or rounded to zero (including null cells)

np not available for publication but included in totals where applicable, unless otherwise indicated

⁽a) Figures do not sum to totals as households may use more than one energy type for hot water.

 ⁽b) Includes a small number of households with other hot water system types.

⁽c) Includes a small number of households living in other dwelling types.

	1	2	3 or more	Not applicable(a)	Total
• • • • • • • • • • • • • • • • •			• • • • • •	• • • • • • • • • • • • •	• • • • • • • •

NUMBER OF SHOWERS

	1	2	more	applicable(a)	Total
• • • • • • • • • • • • • • • • • • • •	NIII N	1BER ('000)		• • • • • • • • • •	• • • • • • • •
	NON	IBER (OOO)	,		
Region of usual residence	000.0	504.0	450.0	±0.4	4 000 0
Sydney Balance of New South Wales	888.9 641.4	581.9 317.1	159.0 68.4	*6.4 *3.7	1 636.2 1 030.6
Total	1 530.3	317.1 899.0	227.3	10.1	2 666.8
Total	1 550.5	699.0	221.3	10.1	2 000.8
Dwelling type					
Separated house	959.3	724.3	214.3	*4.1	1 902.1
Semi-detached	151.5	84.1	np	**np	246.1
Flat/unit/apartment(b)	419.5	90.6	*np	*np	518.6
Total	1 530.3	899.0	227.3	10.1	2 666.8
Nb Ch L					
Number of bedrooms 0–2 Bedrooms	040.0	00.0	*2.0	*7.0	750.5
0–2 Bedrooms 3–4 Bedrooms	646.6	99.6	*3.0	*7.3	756.5
5 or more Bedrooms	861.4 22.4	738.8 60.6	156.0 68.3	*2.8	1 759.0 151.2
5 or more Beardons	22.4	60.6	08.3	_	151.2
Total	1 530.3	899.0	227.3	10.1	2 666.8
• • • • • • • • • • • • • • • • • • • •		• • • • • • • • •			• • • • • • • •
	PERC	CENTAGE (%	5)		
Region of usual residence					
Sydney	54.3	35.6	9.7	*0.4	100.0
Balance of New South Wales	62.2	30.8	6.6	*0.4	100.0
Total	57.4	33.7	8.5	0.4	100.0
Dwelling type	FO 4	00.4	44.0	***	400.0
Separated house	50.4	38.1	11.3	*0.2	100.0
Semi-detached	61.6	34.2 17.5	np *==	**np	100.0 100.0
Flat/unit/apartment(b) Total	80.9 57.4	33.7	*np 8.5	*np <i>0.4</i>	100.0
Total	57.4	33.7	8.3	0.4	100.0
Number of bedrooms					
0–2 Bedrooms	85.5	13.2	*0.4	*1.0	100.0
3–4 Bedrooms	49.0	42.0	8.9	*0.2	100.0
5 or more Bedrooms	14.8	40.1	45.2	_	100.0
Total	57.4	33.7	8.5	0.4	100.0

 $estimate \ has \ a \ relative \ standard \ error \ of \ 25\% \ to \\ np \quad not \ available \ for \ publication \ but \ included \ in \ totals$ 50% and should be used with caution

^{50%} and is considered too unreliable for general use

nil or rounded to zero (including null cells)

where applicable, unless otherwise indicated

estimate has a relative standard error greater than

(a) Includes a small number of households with no

⁽b) Includes a small number of households living in other dwelling types.



WASHING MACHINE

	Top Ioading	Front loading	Twin tub	Other, not applicable and don't know(a)	Total
• • • • • • • • • • • • • • • • • • • •	• • • • • • • •	• • • • • • •	• • • • • •	• • • • • • • •	• • • • • • • • •
	NUMBE	R ('000)			
Region of usual residence					
Sydney	1 276.0	252.0	*8.2	100.0	1 636.2
Balance of New South Wales	827.1	129.9	38.6	35.0	1 030.6
Total	2 103.1	381.9	46.9	134.9	2 666.8
Dwelling type					
Separate house	1 579.8	258.6	41.0	22.7	1 902.1
Semi-detached	186.8	49.4	*3.4	*6.5	246.1
Flat/unit/apartment(b)	336.5	73.9	*2.5	105.7	518.6
Total	2 103.1	381.9	46.9	134.9	2 666.8
Number of dwellings					
0–2 bedrooms	542.0	98.9	np	np	756.5
3–4 bedrooms	1 443.9	262.1	np	np	1 759.0
5 or more bedrooms	117.2	20.8	**np	np	151.2
Total	2 103.1	381.9	46.9	134.9	2 666.8
Total	2 103.1	381.9	46.9	134.9	2 666.8
Total	• • • • • • •	381.9 TAGE (%)	• • • • • •	134.9	2 666.8
• • • • • • • • • • • • • • • • • • • •	• • • • • • •	• • • • • • •	• • • • • •	134.9	2 666.8
Region of usual residence	PERCEN	TAGE (%)	• • • • • •		• • • • • • •
Region of usual residence Sydney	PERCEN	TAGE (%)	*0.5	6.1	100.0
Region of usual residence Sydney Balance of New South Wales	PERCEN 78.0 80.3	TAGE (%)	*0.5 3.7	6.1 3.4	100.0 100.0
Region of usual residence Sydney	PERCEN	TAGE (%)	*0.5	6.1	100.0
Region of usual residence Sydney Balance of New South Wales Total	PERCEN 78.0 80.3	TAGE (%)	*0.5 3.7	6.1 3.4	100.0 100.0
Region of usual residence Sydney Balance of New South Wales	PERCEN 78.0 80.3	TAGE (%)	*0.5 3.7	6.1 3.4	100.0 100.0
Region of usual residence Sydney Balance of New South Wales Total Dwelling type	78.0 80.3 78.9	15.4 12.6 14.3	*0.5 3.7 1.8	6.1 3.4 5.1	100.0 100.0 100.0
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house	78.0 80.3 78.9	15.4 12.6 14.3	*0.5 3.7 1.8	6.1 3.4 5.1	100.0 100.0 100.0
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached	78.0 80.3 78.9 83.1 75.9	15.4 12.6 14.3 13.6 20.1	*0.5 3.7 1.8	6.1 3.4 5.1 1.2 *2.6	100.0 100.0 100.0 100.0
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(b) Total	78.0 80.3 78.9 83.1 75.9 64.9	15.4 12.6 14.3 13.6 20.1 14.2	*0.5 3.7 1.8 2.2 *1.4 *0.5	6.1 3.4 5.1 1.2 *2.6 20.4	100.0 100.0 100.0 100.0 100.0 100.0
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(b) Total Number of bedrooms	78.0 80.3 78.9 83.1 75.9 64.9 78.9	15.4 12.6 14.3 13.6 20.1 14.2 14.3	*0.5 3.7 1.8 2.2 *1.4 *0.5 1.8	6.1 3.4 5.1 1.2 *2.6 20.4 5.1	100.0 100.0 100.0 100.0 100.0 100.0
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(b) Total Number of bedrooms 0–2 bedrooms	78.0 80.3 78.9 83.1 75.9 64.9 78.9	15.4 12.6 14.3 13.6 20.1 14.2 14.3	*0.5 3.7 1.8 2.2 *1.4 *0.5 1.8	6.1 3.4 5.1 1.2 *2.6 20.4 5.1	100.0 100.0 100.0 100.0 100.0 100.0 100.0
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(b) Total Number of bedrooms 0-2 bedrooms 3-4 bedrooms	78.0 80.3 78.9 83.1 75.9 64.9 78.9	15.4 12.6 14.3 13.6 20.1 14.2 14.3	*0.5 3.7 1.8 2.2 *1.4 *0.5 1.8	6.1 3.4 5.1 1.2 *2.6 20.4 5.1	100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(b) Total Number of bedrooms 0–2 bedrooms	78.0 80.3 78.9 83.1 75.9 64.9 78.9	15.4 12.6 14.3 13.6 20.1 14.2 14.3	*0.5 3.7 1.8 2.2 *1.4 *0.5 1.8	6.1 3.4 5.1 1.2 *2.6 20.4 5.1	100.0 100.0 100.0 100.0 100.0 100.0 100.0

estimate has a relative standard error of 25% to 50% and should be used with caution $\,$

estimate has a relative standard error greater than 50% and is considered too unreliable for general use

not available for publication but included in totals where applicable, unless otherwise indicated

⁽a) Includes a small number of households with other washing machine types.

⁽b) Includes a small number of households living in other dwelling types.

	Cold	Warm	Hot	Varies	Don't know	Not applicable	Total
	• • • • • • • •	• • • • • • • •	• • • • • •	• • • • • • •		• • • • • • • •	• • • • • • •
		NUMBER	('000')				
Region of usual residence							
Sydney	1 109.8	272.9	27.2	110.9	13.2	102.1	1 636.2
Balance of New South Wales	777.6	143.9	19.8	46.5	*6.0	36.9	1 030.6
Total	1 887.4	416.8	47.0	157.4	19.2	139.0	2 666.8
Dwelling type							
Separate house	1 402.4	305.9	37.3	113.8	np	np	1 902.1
Semi-detached	176.8	40.6	*4.8	16.6	**np	*np	246.1
Flat/unit/apartment(a)	308.2	70.2	*4.9	27.1	*2.0	106.2	518.6
Total	1 887.4	416.8	47.0	157.4	19.2	139.0	2 666.8
Number of bedrooms							
0-2 Bedrooms	494.5	100.3	11.2	44.5	*2.8	103.2	756.5
3–4 Bedrooms	1 291.8	289.8	33.6	105.4	14.8	23.6	1 759.0
5 or more Bedrooms	101.1	26.6	*2.3	*7.5	*1.5	12.2	151.2
Total	1 887.4	416.8	47.0	157.4	19.2	139.0	2 666.8
•••••	• • • • • • • •	• • • • • • • •	• • • • • • •	• • • • • • •	• • • • • •	• • • • • • • •	• • • • • • •
		PERCENT	AGE (%)				
Region of usual residence							
Sydney	67.8	16.7	1.7	6.8	8.0	6.2	100.0
Balance of New South Wales	75.5	14.0	1.9	4.5	*0.6	3.6	100.0
Total	70.8	15.6	1.8	5.9	0.7	5.2	100.0
Dwelling type							
Separate house	73.7	16.1	2.0	6.0	np	np	100.0
Semi-detached	71.8	16.5	*2.0	6.7	**np	*np	100.0
Flat/unit/apartment(a)	59.4	13.5	*0.9	5.2	*0.4	20.5	100.0
Total	70.8	15.6	1.8	5.9	0.7	5.2	100.0
Number of bedrooms							
0–2 Bedrooms	65.4	13.3	1.5	5.9	*0.4	13.6	100.0
3–4 Bedrooms	73.4	16.5	1.9	6.0	0.8	1.3	100.0
5 or more Bedrooms	66.9	17.6	*1.5	*5.0	*1.0	8.1	100.0
Total	70.8	15.6	1.8	5.9	0.7	5.2	100.0

estimate has a relative standard error of 25% to 50% and $\,$ np $\,$ not available for publication but included in totals where should be used with caution

and is considered too unreliable for general use

applicable, unless otherwise indicated

estimate has a relative standard error greater than 50% (a) Includes a small number of households living in other dwelling types.

	1 to 2 loads	3 to 5 loads	6 to 8 loads	9 loads or more	Not applicable	None or don't know	Total
• • • • • • • • • • • • • • • • • • • •	• • • • • •	NUMBE	R ('000)	• • • • • •	• • • • • • •	• • • • • • •	• • • • • • • •
Region of usual residence							
Sydney	440.6	646.5	279.0	157.3	96.7	16.1	1 636.2
Balance of New South Wales	234.1	407.0	187.3	158.8	34.0	9.4	1 030.6
Total	674.7	1 053.5	466.3	316.1	130.7	25.5	2 666.8
Dwelling type							
Separate house	415.1	772.2	386.9	289.7	np	np	1 902.1
Semi-detached	80.5	104.7	36.8	16.6	*np	**np	246.1
Flat/unit/apartment(a)	179.0	176.7	42.6	9.8	104.4	*6.1	518.6
Total	674.7	1 053.5	466.3	316.1	130.7	25.5	2 666.8
Number of bedrooms							
0-2 bedrooms	294.1	271.3	62.0	21.2	99.8	*8.1	756.5
3-4 bedrooms	368.7	739.3	369.9	248.6	18.7	13.9	1 759.0
5 or more Bedrooms	11.9	42.9	34.4	46.3	12.2	*3.5	151.2
Total	674.7	1 053.5	466.3	316.1	130.7	25.5	2 666.8
• • • • • • • • • • • • • • • • • • • •	• • • • • •	• • • • • • • •	• • • • • • •	• • • • • •	• • • • • • •	• • • • • • •	• • • • • • • •
		PERCEN	TAGE (%)			
Region of usual residence							
Sydney	26.9	39.5	17.1	9.6	5.9	1.0	100.0
Balance of New South Wales	22.7	39.5	18.2	15.4	3.3	0.9	100.0
Total	25.3	39.5	17.5	11.9	4.9	1.0	100.0
Dwelling type							
Separate house	21.8	40.6	20.3	15.2	np	np	100.0
Semi-detached	32.7	42.5	15.0	6.7	**np	**np	100.0
Flat/unit/apartment(a)	34.5	34.1	8.2	1.9	20.1	*1.2	100.0
Total	25.3	39.5	17.5	11.9	4.9	1.0	100.0
Number of bedrooms							
0–2 bedrooms	38.9	35.9	8.2	2.8	13.2	*1.1	100.0
3-4 bedrooms	21.0	42.0	21.0	14.1	1.1	0.8	100.0
5 or more Bedrooms	7.9	28.4	22.7	30.6	8.1	*2.3	100.0
Total	25.3	39.5	17.5	11.9	4.9	1.0	100.0

estimate has a relative standard error of 25% to 50% and $\,$ np $\,$ not available for publication but included in totals where

^{**} estimate has a relative standard error greater than 50% and is considered too unreliable for general use applicable, unless calcing applicable, applicabl



HOUSEHOLDS, Use of a private or shared outdoor clothes line

	USE OF A	PRIVATE OL	JTDOOR LINE		USE OF	USE OF A SHARED OUTDOOR LINE			
	Uses	Does not use	Not applicable	Total	Uses	Does not use	Not applicable	Total	
• • • • • • • • • • • • • • • • • • • •	• • • • • • •	NI	JMBER ('	000)	• • • • • • •	• • • • • •	• • • • • • •	• • • • • • •	
Region of usual residence				•					
Sydney	1 146.3	37.1	452.8	1 636.2	161.3	93.4	1 381.4	1 636.2	
Balance of New South Wales	936.4	22.9	71.3	1 030.6	23.3	9.9	997.3	1 030.6	
Total	2 082.7	60.0	524.1	2 666.8	184.6	103.4	2 378.8	2 666.8	
Dwelling type									
Separate house	1 780.6	36.2	85.3	1 902.1	_	_	1 902.1	1 902.1	
Semi-detached	202.3	11.2	32.6	246.1	_	_	246.1	246.1	
Flat/unit/apartment(a)	99.8	12.6	406.2	518.6	184.6	103.4	230.6	518.6	
Total	2 082.7	60.0	524.1	2 666.8	184.6	103.4	2 378.8	2 666.8	
• • • • • • • • • • • • • • • • • • • •	• • • • • • •	PF	RCENTAG	F (%)	• • • • • • •	• • • • •	• • • • • • •	• • • • • • •	
		. –		_ (/0/					
Region of usual residence									
Sydney	70.1	2.3	27.7	100.0	9.9	5.7	84.4	100.0	
Balance of New South Wales	90.9	2.2	6.9	100.0	2.3	1.0	96.8	100.0	
Total	78.1	2.2	19.7	100.0	6.9	3.9	89.2	100.0	
Dwelling type									
Separate house	93.6	1.9	4.5	100.0	_	_	100.0	100.0	
Semi-detached	82.2	4.5	13.2	100.0	_	_	100.0	100.0	
Flat/unit/apartment(a)	19.2	2.4	78.3	100.0	35.6	19.9	44.5	100.0	
Total	78.1	2.2	19.7	100.0	6.9	3.9	89.2	100.0	

nil or rounded to zero (including null cells)

 ⁽a) Includes a small number of households living in other dwelling types.

				HAS A FIXED INDOOR			
	HAS A CLO	THES AIR	RER	CLOTHE	S LINE		
	••••••	••••••	••••••	••••••	••••••	••••••	
	Yes	No	Total	Yes	No	Total	
			• • • • • • •				
	NUM	BER ('C	000)				
Region of usual residence							
Sydney	1 009.6	626.6	1 636.2	343.0	1 293.2	1 636.2	
Balance of New South Wales	705.9	324.7	1 030.6	278.0	752.6	1 030.6	
Total	1 715.5	951.3	2 666.8	621.0	2 045.7	2 666.8	
Dwelling type							
Separate house	1 219.5	682.6	1 902.1	524.9	1 377.2	1 902.1	
Semi-detached	157.2	88.9	246.1	36.4	209.7	246.1	
Flat/unit/apartment(a)	338.8	179.7	518.6	59.7	458.8	518.6	
Total	1 715.5	951.3	2 666.8	621.0	2 045.7	2 666.8	
rotar	1 /10.0	001.0	2 000.0	021.0	2 0 10.1	2 000.0	
Number of bedrooms							
0–2 Bedrooms	472.3	284.2	756.5	108.3	648.2	756.5	
3–4 Bedrooms	1 134.2	624.8	1 759.0	465.8	1 293.2	1 759.0	
5 or more Bedrooms	109.0	42.2	151.2	47.0	104.2	151.2	
Total	1 715.5	951.3	2 666.8	621.0	2 045.7	2 666.8	
• • • • • • • • • • • • • • • • • • • •	• • • • • • •	• • • • •	• • • • • • • •		• • • • • •	• • • • • •	
	PERCE	ENTAGE	E (%)				
Region of usual residence							
_	61.7	38.3	100.0	21.0	79.0	100.0	
, ,						100.0	
						100.0	
70141	00	00	200.0	20.0		100.0	
Dwelling type							
	64.1	35.9	100.0	27.6	72.4	100.0	
Separate house		36.1	100.0	14.8	85.2	100.0	
Semi-detached			4000				
Semi-detached Flat/unit/apartment(a)	65.3	34.7	100.0	11.5	88.5	100.0	
Semi-detached	65.3 64.3	34.7 35.7	100.0	11.5 23.3	88.5 76.7	100.0 100.0	
Semi-detached Flat/unit/apartment(a)							
Semi-detached Flat/unit/apartment(a) Total							
Semi-detached Flat/unit/apartment(a) Total Number of bedrooms	64.3	35.7	100.0	23.3	76.7	100.0	
Semi-detached Flat/unit/apartment(a) Total Number of bedrooms 0–2 Bedrooms	64.3 62.4	35.7 37.6	100.0	23.3 14.3	76.7 85.7	100.0	
3–4 Bedrooms 5 or more Bedrooms Total Region of usual residence Sydney Balance of New South Wales Total Dwelling type	1 134.2 109.0 1 715.5 PERCE 61.7 68.5 64.3	624.8 42.2 951.3 •••••• ENTAGE 38.3 31.5 35.7	1 759.0 151.2 2 666.8 (%) 100.0 100.0 100.0 100.0 100.0	465.8 47.0 621.0 21.0 27.0 23.3 27.6 14.8	1 293.2 104.2 2 045.7 79.0 73.0 76.7 72.4 85.2	1 759 151 2 666 100 100	

⁽a) Includes a small number of households living in other dwelling types.

	Once per week	Once per fortnight	Once per month	Less than once per month	Never used	Total	
NUMBER ('000)							
Region of usual residence							
Sydney	329.6	77.7	125.5	351.3	129.7	1 013.8	
Balance of New South Wales	131.4	42.9	74.9	246.1	102.1	597.5	
Total	461.0	120.6	200.4	597.5	231.8	1 611.3	
Dwelling type							
Separate house	283.7	91.0	159.6	505.9	162.8	1 202.9	
Semi-detached	50.3	*7.3	13.5	45.0	16.6	132.7	
Flat/unit/apartment(a)	127.1	22.3	27.3	46.6	52.4	275.7	
Total	461.0	120.6	200.4	597.5	231.8	1 611.3	
Number of bedrooms							
0–2 bedrooms	141.9	31.4	38.7	89.4	57.4	358.8	
3-4 bedrooms	285.3	77.5	143.9	468.5	157.3	1 132.5	
5 or more bedrooms	33.9	11.7	17.8	39.5	17.1	120.0	
Total	461.0	120.6	200.4	597.5	231.8	1 611.3	
Total		• • • • • • •		597.5	231.8	1 611.3	
Total		120.6 CENTAGE		597.5	231.8	1 611.3	
Total Region of usual residence		• • • • • • •		597.5	231.8	1 611.3	
•••••		• • • • • • •		597.5 34.7	231.8	100.0	
Region of usual residence	PERO	CENTAGE	E (%)	• • • • • •	• • • • • • •	• • • • • •	
Region of usual residence Sydney	PER(CENTAGE 7.7	12.4	34.7	12.8	100.0	
Region of usual residence Sydney Balance of New South Wales	PERO 32.5 22.0	7.7 7.2	12.4 12.5	34.7 41.2	12.8 17.1	100.0	
Region of usual residence Sydney Balance of New South Wales Total	PERO 32.5 22.0	7.7 7.2	12.4 12.5	34.7 41.2	12.8 17.1	100.0	
Region of usual residence Sydney Balance of New South Wales Total Dwelling type	PER(32.5 22.0 28.6	7.7 7.2 7.5	12.4 12.5 12.4	34.7 41.2 37.1	12.8 17.1 14.4	100.0 100.0 100.0	
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house	PERO 32.5 22.0 28.6	7.7 7.2 7.5	12.4 12.5 12.4	34.7 41.2 37.1	12.8 17.1 14.4	100.0 100.0 100.0	
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached	32.5 22.0 28.6 23.6 37.9	7.7 7.2 7.5 7.6 *5.5	12.4 12.5 12.4 13.3 10.2	34.7 41.2 37.1 42.1 33.9	12.8 17.1 14.4 13.5 12.5	100.0 100.0 100.0	
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(a)	32.5 22.0 28.6 23.6 37.9 46.1	7.7 7.2 7.5 7.6 *5.5 8.1	12.4 12.5 12.4 13.3 10.2 9.9	34.7 41.2 37.1 42.1 33.9 16.9	12.8 17.1 14.4 13.5 12.5 19.0	100.0 100.0 100.0 100.0 100.0 100.0	
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(a) Total	32.5 22.0 28.6 23.6 37.9 46.1	7.7 7.2 7.5 7.6 *5.5 8.1	12.4 12.5 12.4 13.3 10.2 9.9	34.7 41.2 37.1 42.1 33.9 16.9	12.8 17.1 14.4 13.5 12.5 19.0	100.0 100.0 100.0 100.0 100.0 100.0	
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(a) Total Number of bedrooms	32.5 22.0 28.6 23.6 37.9 46.1 28.6	7.7 7.2 7.5 7.6 *5.5 8.1 7.5	12.4 12.5 12.4 13.3 10.2 9.9 12.4	34.7 41.2 37.1 42.1 33.9 16.9 37.1	12.8 17.1 14.4 13.5 12.5 19.0 14.4	100.0 100.0 100.0 100.0 100.0 100.0	
Region of usual residence Sydney Balance of New South Wales Total Dwelling type Separate house Semi-detached Flat/unit/apartment(a) Total Number of bedrooms 0-2 bedrooms	PERO 32.5 22.0 28.6 23.6 37.9 46.1 28.6	7.7 7.2 7.5 7.6 *5.5 8.1 7.5	12.4 12.5 12.4 13.3 10.2 9.9 12.4	34.7 41.2 37.1 42.1 33.9 16.9 37.1	12.8 17.1 14.4 13.5 12.5 19.0 14.4	100.0 100.0 100.0 100.0 100.0 100.0 100.0	

 $^{^{*}}$ estimate has a relative standard error of 25% to 50% and should be used with caution

⁽a) Includes a small number of households living in other dwelling types.

	HOUSEHOLDS WITH A SWIMMING POOL OR SPA					
	In-ground pool	Above ground pool	Spa attached to a pool	In-ground spa	Above ground spa	Total
• • • • • • • • • • • • • • • • • • • •	• • • • • • •	• • • • • •	• • • • • •	• • • • • • •	• • • • • •	• • • • • • •
	NUME	BER ('0	00)			
Region of usual residence						
Sydney	190.9	34.8	10.3	*4.5	17.2	244.1
Balance of New South Wales	79.8	24.4	*2.3	*1.8	13.0	117.0
Total	270.6	59.1	12.6	*6.3	30.2	361.1
• • • • • • • • • • • • • • • • • • • •	PERCE	ENTAGE	(%)	• • • • • • •	• • • • • •	• • • • • • •
Region of usual residence						
Sydney	78.2	14.2	4.2	*1.9	7.1	100.0
Balance of New South Wales	68.2	20.8	*2.0	*1.5	11.1	100.0
Total	75.0	16.4	3.5	*1.7	8.4	100.0

estimate has a relative standard error of 25% to 50% and should be used with caution

HOUSEHOLDS WITH A SWIMMING POOL AND A POOL COVER, Frequency of use of pool cover in the warmest and coolest months(a)

	USE OF POOL COVER IN WARMEST MONTHS			USE OF	USE OF POOL COVER IN COOLEST MONTHS			
	Regularly	Sometimes	Not used	Total	Always	Sometimes	Not used	Total
NUMBER ('000)								• • • • • •
Region of usual residence								
Sydney	19.4	*7.0	10.5	36.9	27.1	*4.4	*5.4	36.9
Balance of New South Wales	20.5	*5.1	*8.2	33.8	26.3	*5.8	*1.6	33.8
Total	40.0	12.1	18.6	70.7	53.3	10.3	*7.1	70.7
PERCENTAGE (%)								
Region of usual residence								
Sydney	52.7	*19.0	28.4	100.0	73.3	*11.9	*14.8	100.0
Balance of New South Wales	60.8	*15.0	*24.2	100.0	77.8	*17.3	*4.8	100.0
Total	56.6	17.1	26.4	100.0	75.5	14.5	*10.0	100.0

estimate has a relative standard error of 25% to 50% and should be (a) "Warmest months' and 'coolest months' left to the understanding of used with caution

⁽a) Figures do not sum to totals as households may have a swimming pool and/or spa.



HOUSEHOLDS WITH A SWIMMING POOL AND A POOL FILTER, Use of pool filter pump in the warmest months(a)

	HOURS I	FILTERED PER	R DAY					
					Not			
				12 or	filtered	Don't	Not	
	1–2	3–5	6–11	more	daily	know	filtered	Total
		NUME	BER ('000))				
Region of usual residence								
Sydney	28.4	82.2	89.5	*6.0	*2.2	14.2	*2.2	224.7
Balance of New South Wales	17.1	32.9	39.1	*2.3	*2.3	8.6	_	102.3
Total	45.6	115.0	128.6	*8.3	*4.5	22.9	*2.2	327.0
• • • • • • • • • • • • • • • • • • • •	• • • • • •	DEDOE	NTAGE (0/)	• • • • • • •	• • • • •	• • • • • •	• • • • •
		PERCE	NTAGE (%)				
Region of usual residence								
Sydney	12.7	36.6	39.8	*2.7	*1.0	6.3	*1.0	100.0
Balance of New South Wales	16.8	32.1	38.2	*2.3	*2.2	8.4	_	100.0
Total	13.9	35.2	39.3	*2.5	*1.4	7.0	*0.7	100.0

estimate has a relative standard error of 25% to 50% and (a) Warmest months' is left to the understanding of the should be used with caution

nil or rounded to zero (including null cells)

EXPLANATORY NOTES

INTRODUCTION

SCOPE

- **1** This publication contains results from the 2006 New South Wales (NSW) State Supplementary Survey, Domestic Energy and Water Use.
- **2** The survey was conducted throughout NSW during the two weeks commencing Monday 9 October 2006. The survey was conducted as a supplement to the Australian Bureau of Statistics (ABS) Monthly Population Survey (MPS). The MPS is based on a multi-stage area sample of private dwellings (houses, flats, etc.) and a list sample of non-private dwellings (hotels, motels, etc.). Information is obtained from the occupants of the selected dwellings by specially trained interviewers.
- **3** For details of the design, scope and coverage of the MPS, readers should refer to *Information Paper: Labour Force Sample Design, 2002* (cat. no. 6269.0), and any recent edition of the ABS publication, *Labour Force, Australia* (cat. no. 6202.0).
- **4** Information was collected by either a face-to-face or telephone interview from one responsible adult per household. Respondents answered questions on behalf of all household members aged 18 years or over. The survey was conducted using seven-eighths of the full sample of private dwellings in NSW that were included in the MPS and excluded:
 - members of the 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:
- private dwellings containing visitors only;
- visitors to the household; and
- residents of non-private dwellings such as hospitals, motels and prisons.
- **5** The survey was conducted in both urban and rural areas throughout NSW, but excluded persons living in very remote parts of NSW who would have otherwise been within the scope of the survey. The exclusion of these persons had only a minor impact on any aggregate estimates.
- **6** Information was sought from approximately 7,500 households, of whom about 7,000 (94%) responded.
- REFERENCE PERIOD
- **7** The reference period for all tables was October 2006.

COVERAGE

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

EFFECTS OF ROUNDING

9 Estimates have been rounded and discrepancies may occur between sums of the component items and totals.

ACKNOWLEDGMENT

10 ABS publications draw extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated. Without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the *Census and Statistics Act 1905*.

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EXPLANATORY NOTES continued

RELATED PUBLICATIONS

11 The ABS produces a wide range of publications containing social and demographic statistics. Other ABS publications which relate to this survey topic include:

Australia's Environment: Issues and Trends, 2006 (cat. no. 4613.0)

Domestic Use of Water and Energy, Western Australia, October 2006 (cat. no. 4652.5)

Domestic Water Use, New South Wales, October 2002 (cat. no. 4616.1)

Domestic Water Use, Western Australia, October 2003 (cat. no. 4616.5.55.001)

Domestic Use of Water & Energy, South Australia, October 2004 (cat. no. 4618.4)

Environmental Issues: People's Views and Practices, March 2002 (cat. no. 4602.0)

Environmental Issues: People's Views and Practices, March 2005 (cat. no. 4602.0)

New South Wales in Focus, 2007 (cat. no. 1338.1)

12 Current publications and other products released by the ABS are listed in the *Catalogue of Publications and Products* (cat.no. 1101.0). The Catalogue is available from any ABS office or the ABS web site. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

APPENDIX ADDITIONAL DATA AVAILABLE

ADDITIONAL DATA AVAILABLE

In addition to the statistics provided in this publication, the Australian Bureau of Statistics (ABS) can produce upon request, subject to confidentiality and data quality restrictions, customised tables to meet special data requirements. These tables are subject to confidentiality and data quality restrictions. Inquiries should be made to the national Information and Referral Service on 1300 135 070. Information collected in the survey included:

Heating

- Reverse cycle air-conditioning not ducted
- Electric heater ducted
- Electric heater not ducted
- Electric heater floor slab heating
- Gas heater ducted
- Gas heater not ducted flued
- Gas heater not ducted unflued
- Gas heater floor slab heating

Cooling

- Air conditioner split system
- Air conditioner set in a wall/window
- Air conditioner ducted
- Air conditioner portable
- Evaporative cooler set in a wall/window
- Evaporative cooler ducted
- Evaporative cooler portable
- Ceiling fan
- Other fan

Whether solar energy system

has a booster

- Electric
- Mains gas
- Bottled gas
- Wood
- Not boosted

Bath showers and toilets

- Number of showers that are outside the dwelling
- Number of baths
- Whether the shower or the bath is used more often
- Number of toilets both inside and outside

Dwellings

- Number of bedrooms
- Whether have any waterbeds
- Number of waterbeds

Swimming pools

- Whether pool has ever been emptied and refilled
- Number of times pool emptied and refilled in last 5 years

TECHNICAL NOTE SAMPLING VARIABILITY

ESTIMATION PROCEDURE

1 Estimates derived from this survey were obtained using a post-stratification procedure. Post-stratification is a method of stratifying or dividing a sample into groups after the responses have been received. It is used to improve the quality of results through stratifying by variables that were not used at the time of sample design. In this survey the procedure ensured that the survey estimates for persons conformed to independent estimates of the population by age, sex and part of state.

RELIABILITY OF ESTIMATES

2 Estimates in this publication are subject to non-sampling and sampling errors.

Non-Sampling errors

- **3** Non-sampling errors may arise as a result of errors in the reporting, recording or processing of the data and can occur even if there is a complete enumeration of the population. Non-sampling errors can be introduced through inadequacies in the questionnaire, non-response, inaccurate reporting by respondents, errors in the application of survey procedures, incorrect recording of answers and errors in data entry and processing.
- **4** It is difficult to measure the size of the non-sampling errors. The extent of these errors could vary considerably from survey to survey and from question to question. Every effort is made to minimise these errors by the careful design of questionnaires, training and supervision of staff and development of efficient data processing procedures.

Sampling errors

5 Sampling errors are the errors which occurs by chance because the data were obtained from a sample, rather than the entire population.

ESTIMATES OF SAMPLING ERROR

- **6** One measure of the variability of estimates which occurs as a result of surveying only a sample of the population is the standard error (see table on page 23).
- **7** There are about 2 chances in 3 (67%) that a survey estimate will differ by less than one standard error from the number that would have been obtained if all persons had been included in the survey. There are about 19 chances in 20 (95%) that the estimate will be less than two standard errors.
- **8** Linear interpolation is used to calculate the standard error of estimates falling between the sizes of estimates listed in the table.
- **9** The standard error (SE) can also be expressed as a percentage of the estimate. This is known as the relative standard error (RSE). The RSE is determined by dividing the standard error of an estimate SE(x) by the estimate x and expressing it as a percentage. That is, (where x is the estimate) $RSE(x) = \frac{100SE(x)}{x}$
- **10** An example of the calculation and use of standard errors for estimates of households follows. Table 2 shows that the estimated number of households in NSW who used a Split system Air Conditioner as a cooling device during 2006 was 560,800. Since the estimate is between 500,000 and 1,000,000 the standard error (as shown in the table on page 23) will be between 16,216 and 21,662 and can be approximated as 16,800 using linear interpolation. Therefore, there are 2 chances in 3 that the value that would have been obtained, had all persons been included in the survey, lies between 544,000 and 577,600. Similarly, there are about 19 chances in 20 that the value lies between 527,200 and 594,400.
- **11** Proportions and percentages formed from the ratio of two estimates are also subject to sampling error. The size of the error depends on the accuracy of both the numerator and the denominator. The formula for the relative standard error (RSE) of a proportion or percentage is,

 $RSE(\frac{x}{y}) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$

ESTIMATES OF SAMPLING ERROR continued

12 Only estimates with relative standard errors of 25% or less, and percentages based on such estimates, are considered sufficiently reliable for most purposes. However, estimates and percentages with a larger RSE have been included, preceded by * (RSE between 25% and 50%) or ** (RSE greater than 50%) to indicate that they are subject to high standard errors and should be used with caution.

STANDARD ERRORS OF ESTIMATES OF NSW PERSONS—October 2006

		Relative
Size of	Standard	standard
estimate	error	error
persons	no.	%
1 000	645	64.5
1 500	824	54.9
2 000	977	48.8
2 500	1 114	44.5
3 000	1 238	41.3
3 500	1 353	38.6
4 000	1 460	36.5
5 000	1 657	33.1
8 000	2 151	26.9
10 000	2 430	24.3
20 000	3 514	17.6
30 000	4 333	14.4
50 000	5 602	11.2
100 000	7 841	7.8
200 000	10 822	5.4
300 000	12 982	4.3
500 000	16 216	3.2
1 000 000	21 662	2.2
2 000 000	28 533	1.4
5 000 000	40 190	0.8
0 000 000	51 235	0.5

13 Where differences between data items have been noted in the Summary of Findings, they are statistically significant unless otherwise specified. In this publication a statistically significant difference is one where there are 19 chances in 20 that the difference noted reflects a true difference between population groups of interest rather than being the result of sampling variability.

GLOSSARY

Bedroom A room within the dwelling that is defined as a bedroom on the dwelling plan.

Bottled gas Gas provided in a large metal bottle or cylinder which is located near the dwelling. A

bottled gas retailer may periodically remove empty gas bottles and replace them with

refilled ones.

Clothes airer A portable clothes stand for drying clothes (also known as a clothes horse).

Ducted air conditioner A ducted air conditioner (including a ducted reverse cycle air conditioner) is one where

air is piped from a single source through the dwelling to more than one outlet.

Ducted gas heater A ducted gas heater is one where air is piped from a single source through the dwelling

to more than one outlet.

Evaporative air cooler An air conditioning appliance or system that uses fan-assisted evaporation of water to

absorb heat from the air.

Gas heater A heater that uses gas for heating. It may need a match or electricity to ignite or start the

appliance.

Gas heater: Not ducted - Flued A flued gas heater is usually not portable. It is vented to the outside by a flue or some

other form of chimney.

Gas heater: Not ducted -An unflued gas heater is usually a portable appliance connected to a gas outlet in the Unflued

floor or wall via a hose with a bayonet fitting. It may also have a power connection plug.

Hot water system A device used for heating water for a dwelling. The main energy source for heating is

generally electricity, gas or solar although some dwellings use other sources (e.g. wood

combustion).

Gas connected to the household by underground pipes and provided on a continuous Mains gas

basis (i.e. never runs out).

Off-peak electricity Electricity used during periods of less activity than peak times. Water systems that use

off-peak electricity are set to operate during an off-peak period, normally at night.

Oil heater A heater that burns oil for heating. It may need a match or electricity to ignite or start

the appliance.

Reverse cycle air conditioner An air conditioner that can be used for heating or cooling. The temperature can be

varied between warming and cooling settings

Split system air conditioner This comprises a main unit (generally with an integral fan) located outside the dwelling

and connected by piping to one or more ceiling, wall or floor mounted cooling units

inside the dwelling.

F O R MORE INFORMATION

www.abs.gov.au the ABS web site is the best place for INTERNET

data from our publications and information about the ABS.

LIBRARY A range of ABS publications are available from public and

tertiary libraries Australia wide. Contact your nearest library to determine whether it has the ABS statistics you

require, or visit our web site for a list of libraries.

INFORMATION AND REFERRAL SERVICE

Our consultants can help you access the full range of information published by the ABS that is available free of charge from our web site, or purchase a hard copy publication. Information tailored to your needs can also be requested as a 'user pays' service. Specialists are on hand to help you with analytical or methodological advice.

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