



Millward Brown
www.millwardbrown.com

what+why=mb

presence
relevance
performance
advantage
bonding

***National Appliance
and Equipment
Energy Efficiency
Committee
(NAEEEC)***

**ENERGY RATING
AUDIT
'Shadow Shop'
- Stage Two Report -**

**Prepared by
Jasmine Hoye, Anna Kelly
April 2001
Study No: 32817**

Contents

Background	2
Research Objectives Stage Two	6
Research Methodology	8
Total Sample Results	12
Clothes Washing Machines	26
Dishwashing Machines	34
Air Conditioners	42
Refrigerators and Freezers	50
Clothes Dryers	58
Comparative Analysis with Previous Audits	65



Background



Background

For the last fifteen years, legislation has been in place throughout most States and Territories for prescribed domestic electrical appliances to display the Energy Efficiency Rating label.

This legislation aims to ensure that consumers are aware of the energy efficient savings that some appliances have over their counterparts, thereby facilitating more informed decision making and prompting manufacturers to enhance the energy efficiency of their products.

The Energy Efficiency Labelling Program applies to the following groups of domestic electrical appliances:

- Clothes washing machines
- Dishwashing machines
- Refrigerative air-conditioners (up to 7.5 kW output capacity)
- Refrigerators and freezers
- Clothes dryers

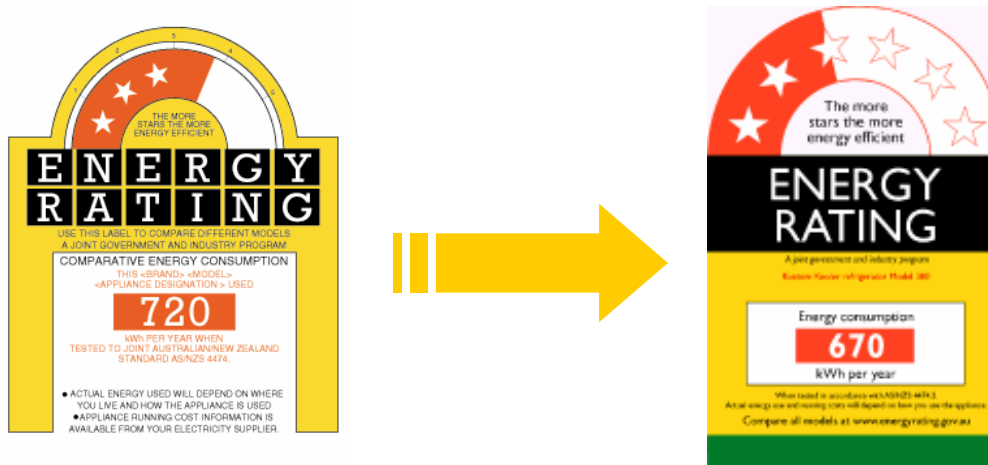
A slightly different rating scheme operates for gas appliances, however, in this case the gas labelling scheme was not included in the research program.

The National Appliance and Equipment Energy Efficiency Committee (NAEEEC) is the national coordinating (steering) group for the Energy Efficiency Labelling program. It is made up of representatives from State, Territory and Federal Government authorities involved with regulating and implementing Energy Rating Labelling for electrical appliances.

State and Territory legislation requires that proclaimed electrical appliances must not be displayed or sold unless the appliance is marked or labelled in the prescribed manner for energy efficiency. Each State and Territory is responsible for administering its own legislation and regulations. A model registered in one State/Territory is accepted as registered in all States and Territories, however there is no uniformly accepted method of measuring compliance across the country.

One approach to measuring compliance is by means of independently auditing a sample of electrical appliance retail stores that is representative of the market as a whole. Previous such studies, including a 'shadow shop' audit conducted by Millward Brown (previously known as Yann Campbell Hoare Wheeler) in 1998, have revealed a high compliance rate amongst the retail sector and an above average awareness of the Energy Rating Labelling Program (over 75%).

In 2000, the Energy Rating Labelling program was revised, resulting in a number of changes to the label itself, as illustrated below. The revised label can be clearly identified by the green band at the base. Other changes include the appearance of stars rating the efficiency of the appliance on a scale of one to six; details as to the amount of energy the appliance typically uses in kilowatt-hours when tested to the Australian Standard (and which Standard was used); how many stars the appliance had under the original label measurement system; and the appliance model number. The changes reflect that the program is now more stringent in applying ratings, effectively providing consumers with a more meaningful guide, as well as encouraging continued improvements to the efficiency of appliances on the market.



Retailers were required to comply with the program by ensuring that the new labels were correctly displayed on the relevant appliances by the 1st of October 2000. The NAEEEC commissioned Stage One of this audit, which was conducted in November 2000 to provide a 'snapshot' of compliance immediately proceeding the mandatory date for implementation of the changeover.

Stage One was conducted across 150 stores (in VIC, NSW and QLD) and revealed that:

- 70% of all appliances audited were correctly labelled;
- 21% of all appliances audited were labelled with the old label; and
- 9% of all appliances audited had no energy efficiency rating label at all, the highest incidence of this being among air conditioners.

Stage Two of the audit was conducted in March 2001, in 401 electrical appliance retail stores across Australia. It will serve to identify breaches of the regulation, as conveyed to retailers in a number of issues of the industry newsletter, *Switched On*.

This report details the results of Stage Two of the Energy Rating Audit, as well as a comparative analysis with Stage One and the 1998 audit, as appropriate.



Research Objectives Stage Two



Objectives

Stage Two:

The aim of the second stage of the audit was to obtain a more comprehensive assessment of the compliance level for displaying the new energy efficiency rating label, with a representative and significantly larger sample size of electrical retail outlets selling the relevant appliances throughout Australia.

This data is reported as follows:

- By total sample (Australia-wide)
- By appliance group
- By State
- By metropolitan versus regional stores
- By store size (based on differing amounts of floor stock)
- By manufacturer or brand

One of the objectives of this second, more comprehensive study is to aid government jurisdictions in identifying breaches of the regulation.



Research Methodology



Research Methodology

Millward Brown Australia conducted a 'Shadow Shop' in the metropolitan areas of each Australian State and Territory and in the regional areas of New South Wales, Victoria and Queensland, using a stratified random sampling approach, covering different store types and sizes.

The 'Shadow Shop' consisted of interviewers anonymously viewing a total of 401 electrical retail sites. The sample size was intended to provide a representative sample of compliance to the label change.

Current Yellow Pages store listings were used as a guide in developing the sample for the audit. All stores audited in Stage One of the research were removed from the sample for Stage Two. A complete list of sites was supplied to the respective field departments within each state.

Melbourne CATI interviewers contacted the 'shadow shoppers' via mobile phone at a predesignated time, while they were visiting each store. This allowed for discreet and accurate data collection, in accordance with the ESOMAR Guidelines on Mystery Shopping.

Interviewers worked as a team to record the type, brand and number of all appliances in the retail outlets, within the five categories covered by the Energy Efficiency Labelling Program. They discerned whether each unit had:

- The new energy label correctly displayed;
- The 'old', or pre-2000 compliant label only on display; or
- No energy rating label displayed at all.

The field work and data collection for the study was conducted between the 6th and the 28th of March 2001.



Sample Breakdown

The number of retail outlets evaluated within each location is detailed below:

<i>Location</i>	<i>Number of Outlets Sampled</i>	<i>(%)</i>
NSW Metropolitan	67	17
NSW Regional	34	8
VIC Metropolitan	65	16
VIC Regional	28	7
QLD Metropolitan	39	10
QLD Regional	38	9
WA	42	10
SA	38	9
TAS	21	5
ACT	18	4
NT	11	3
<i>Total Sample</i>	<i>401</i>	<i>100</i>

May not total 100%, due to rounding

The breakdown of the three categories of store sizes is as follows:

<i>Store Size</i>	<i>Items on Display</i>	<i>Number of Stores</i>	<i>(%)</i>
Megastores/ superstores/ department stores	150+	35	9
Large sized retailers	50 – 149	238	59
Small to medium sized retailers	1 – 49	128	32
<i>Total</i>	<i>N/A</i>	<i>401</i>	<i>100</i>

As store size was classified and determined by the total number of items audited within each store, franchise and department stores are not restricted to the one size category. This method of categorising stores by size was adopted to ensure that the proportion of large, medium and small outlets in the sample is similar to that of the Australian retail appliance store population. This is not only a systematic approach, but is also one that permits more accurate representation of the market environment.

A total of 30,805 electrical appliances were audited, which included:

- 8,383 Clothes washing machines
- 3,875 Dish washing machines
- 2,108 Refrigerative air-conditioners (up to 7.5 kW output capacity)
- 13,774 Refrigerators and freezers
- 2,665 Clothes dryers

The breakdown of the 401 retail outlets is as follows:

<i>Name</i>	<i>No.</i>	<i>Name</i>	<i>No.</i>	<i>Name</i>	<i>No.</i>
Betta	49	David Jones	15	Retravisision	105
Bing Lee	9	Gasmart	10	Myer / Grace Bros.	30
Bi-Rite	4	The Good Guys	11	Truscotts	5
Carrier	13	Harvey Norman	37	Warehouse Sales	8
Chandlers	13	Kleenmaid/ St George	15	Independent / Other	77

Total Sample Results



Overall Findings

Of the 30,805 retail electrical appliances audited in Stage Two, the overall proportion of appliances with the new energy efficiency rating label on display was 78%. With this total sample, the margin of error for this result is +/- 0.5%. That is, we can be 95% confident that the true result lies between 77.5% and 78.5%.¹ As per the 2000 review, 9% of appliances were unlabelled, while 13% still bore the old label.

The most compliant appliance group was that of refrigerators and freezers, which achieved 84%, followed by clothes washing machines at 80%. Dishwashing machines and clothes dryers were marked with the new label in 77% and 76% of cases, respectively. As per the 1998 and 2000 audits, air conditioners performed significantly below all other appliance groups, with a compliance rating of just 36%. This may be a reflection of a degree of confusion among retailers as to which air conditioners require labelling, along with the way in which the labels are often positioned on the units (for example, on the output vent), which tends not to promote adhesion.

It is interesting to note that the level of compliance by appliance type appears to correlate with approximate market share, in that the more any category of appliance is on display in Australian retail appliance stores, the more likely it is that the overall appliance category will be correctly labelled.

Of the eight States/Territories included in the study, SA achieved the highest level of compliance at 87%, followed by NSW, VIC and QLD, with 79% respectively. The poorest compliance results were found in NT (62%) and TAS (69%).

While there was a noticeable lag in compliance across all regional areas in Stage One, regional retailers now appear to be roughly on par with their metropolitan counterparts. The only difference was found in QLD, with metro stores achieving 83% compliance and regional stores 76%. In the appliance types, clothes dryers on display in regional stores appear to be somewhat less likely than their metropolitan counterparts to have the new label on display (72% cf. 77%).

¹ A margin of error table for a range of sample sizes is provided as an appendix, for reference. However, as all appliances under the Energy Efficiency Labelling Program were audited within each store in the survey sample, it should be noted that this is only relevant when extrapolating the results to the total population of retail electrical appliance stores in Australia.

Among the three store size categories, the small to medium stores were somewhat less likely to have appliances with the new Energy Efficiency label on display (68%), compared with large stores (80%) and mega/superstores (77%). The smaller stores also have a high rate of unlabelled appliances (16%), which is twice that of the large store category.

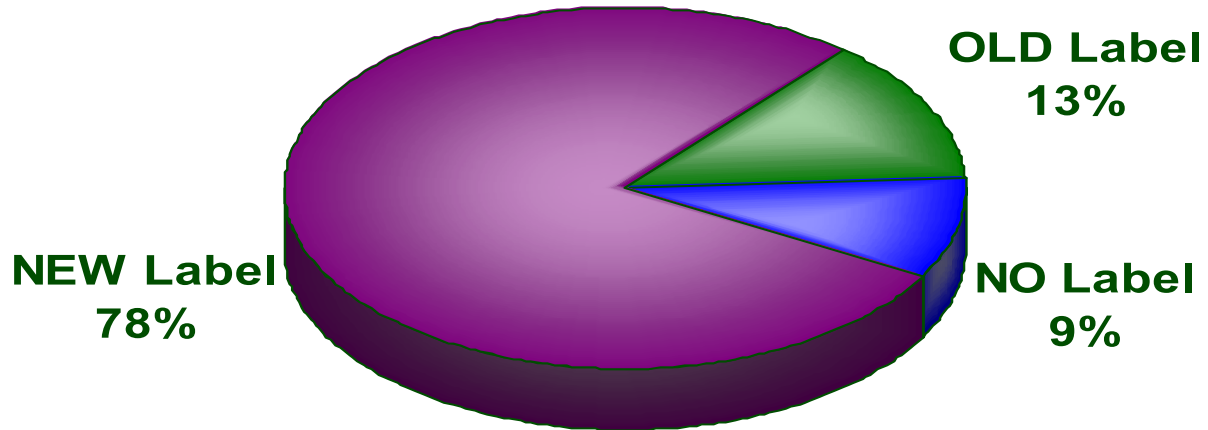
When considering compliance by retailers, one in five (20%) of all stores audited achieved compliance in the range of 90-100% and almost one third (29%) had 80-89% compliance. Therefore, half (49%) of all stores are 80-100% compliant (above the national average). Four in ten stores (38%) had compliance in the 50-79% range, while 12% of stores rated between 0% and 49%. While stores in most States tended to rate most heavily in the upper-middle ranges, VIC, TAS, NT and WA to a degree have tended towards a more even spread, if not slightly towards the lower range. NT and TAS certainly had lower compliance levels overall, with virtually every store in those regions being audited.

It should be noted that 15 of the 401 stores were 100% compliant. Interestingly, these were mostly in the small to medium store size category (12 of the 15), which may serve to counteract the below average overall performance of this category. None of the mega/super stores can boast this achievement as yet. Stores within this exemplary group include 5 Myer / Grace Bros, 3 Beta Electrical, 1 Carrier and 1 Gasmart. Conversely, a somewhat disappointing 18 stores had zero compliance, although all of these were in the small to medium category and include 5 Carrier and 4 Gasmart stores. This would serve to demonstrate that while the larger stores may be required to deploy more resources to comply with the program, their performance tends to be more consistent across the board.

The following charts indicate the overall findings of the audit, including compliance by total sample, by appliance type, by State/Territory, by metropolitan vs regional, by store size, by range of compliance among retailers and by brand. The charts indicate the proportion of appliances with new labels, those with old labels and those that were unlabelled. Beneath the charts, tables indicate precisely how many appliances were audited per group and sub-group.

Following this section, detailed findings are provided by appliance type, with analysis of the sub-groups mentioned above. Finally, there is a section that offers a comparative analysis with the 1998 and 2000 audits, as appropriate.

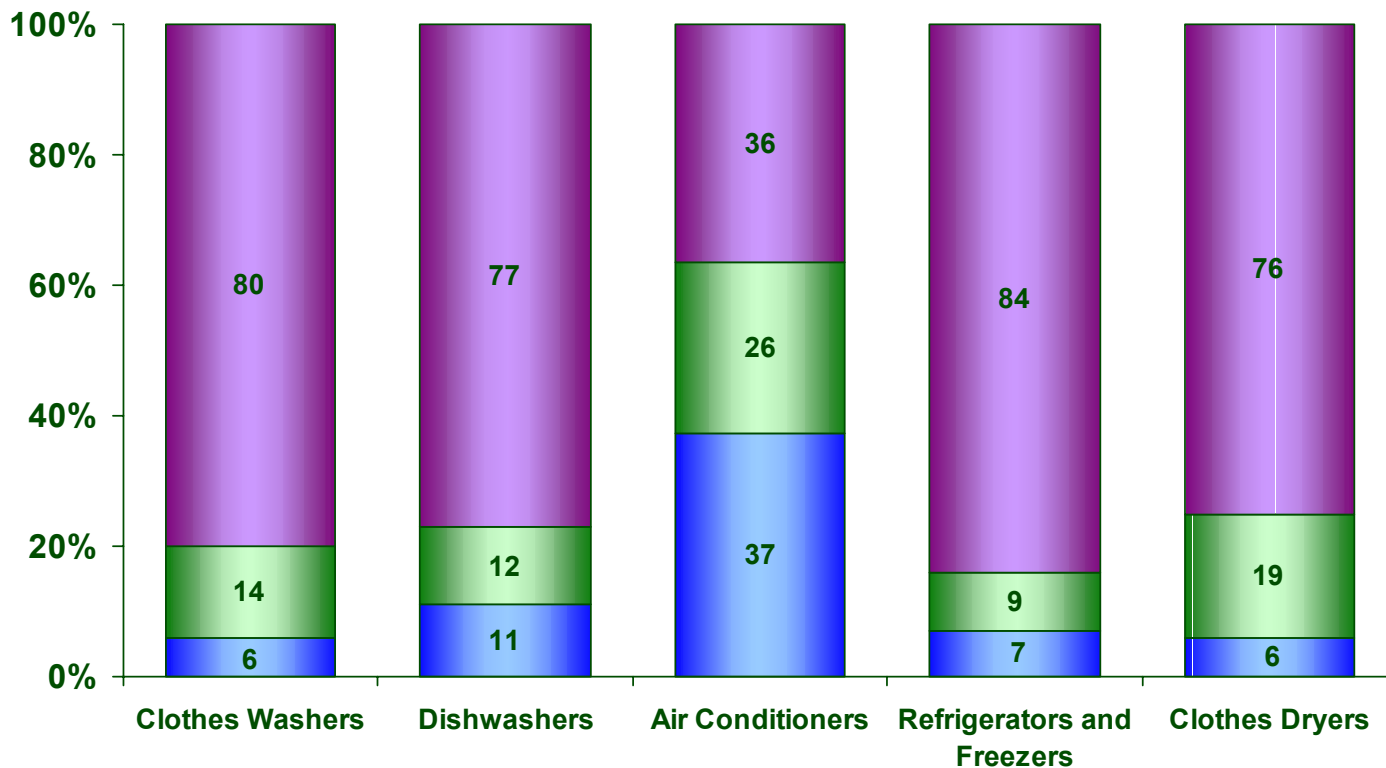
Total Sample Compliance



	(N)	(%)
On Display	30,805	100
NEW Label Compliant	23,977	78
OLD Label Compliant	3,991	13
NO Label	2,837	9

Note: May not total 100%, due to rounding.

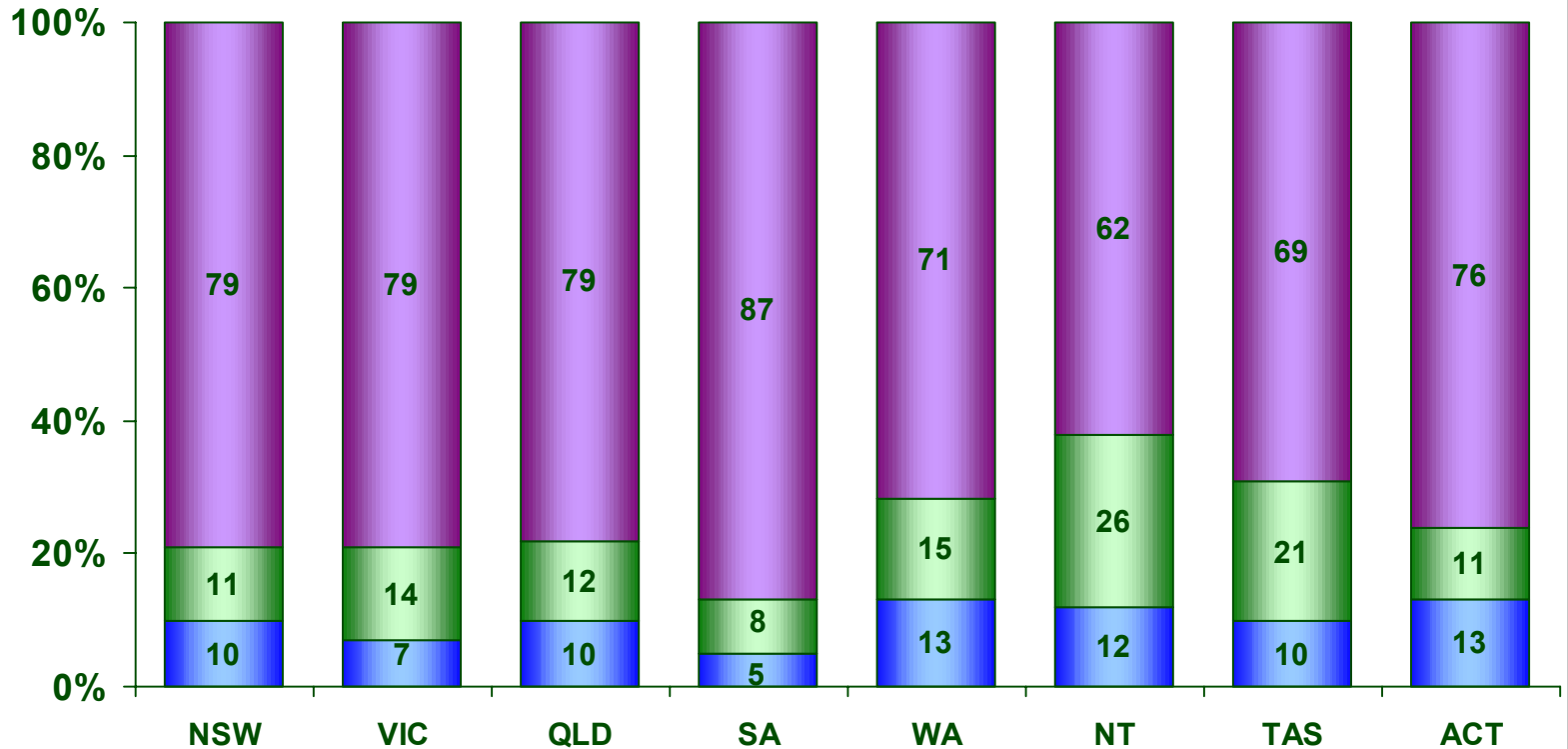
Compliance by Appliance Type (Total Sample) *NAEEEC*



On Display (n):	8,383	3,875	2,108	13,774	2,665
NEW Label (n):	6,690	2,976	764	11,534	2,013
OLD Label (n):	1,176	457	555	1,306	497
NO Label (n):	517	442	789	934	155

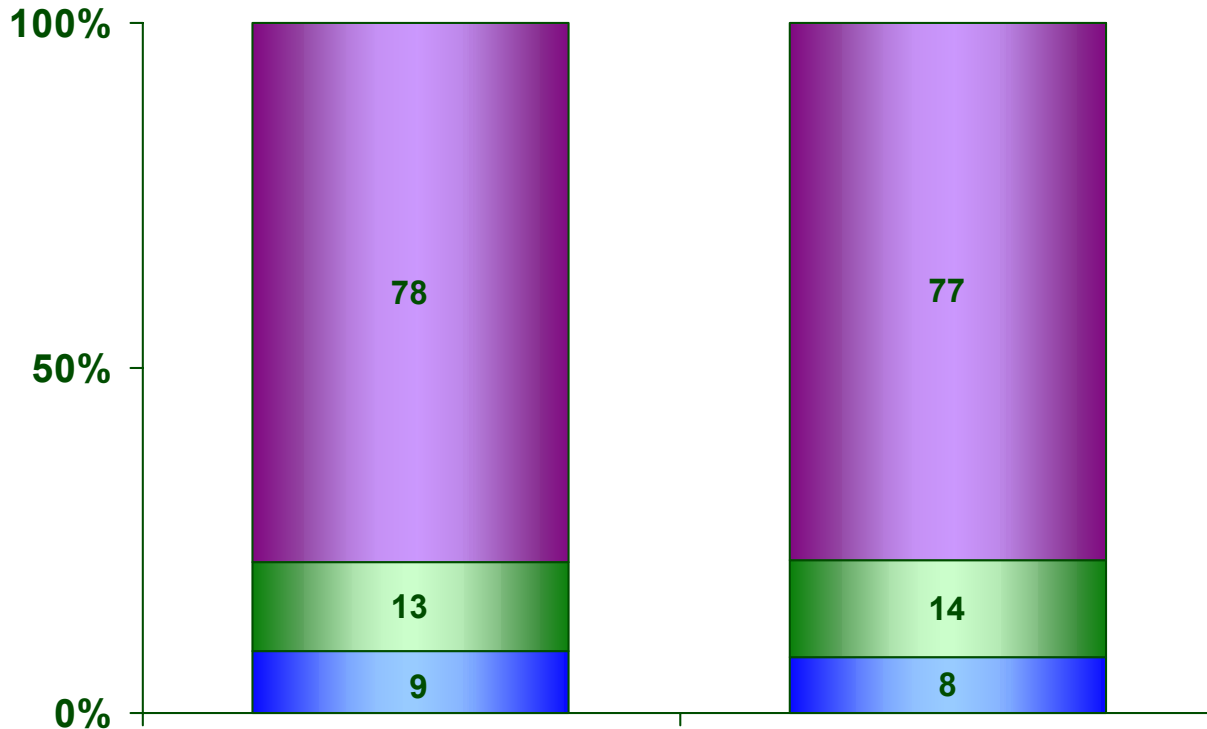


Compliance by State (Total Sample)



On Display (n):	7,607	7,026	5,464	2,982	3,162	782	1,805	1,541
NEW Label (n):	5,974	5,585	4,310	2,590	2,257	481	1,243	1,173
OLD Label (n):	865	957	634	246	488	207	382	175
NO Label (n):	768	484	520	146	417	94	180	193

Metropolitan vs Regional Compliance (Total Sample)



Metropolitan

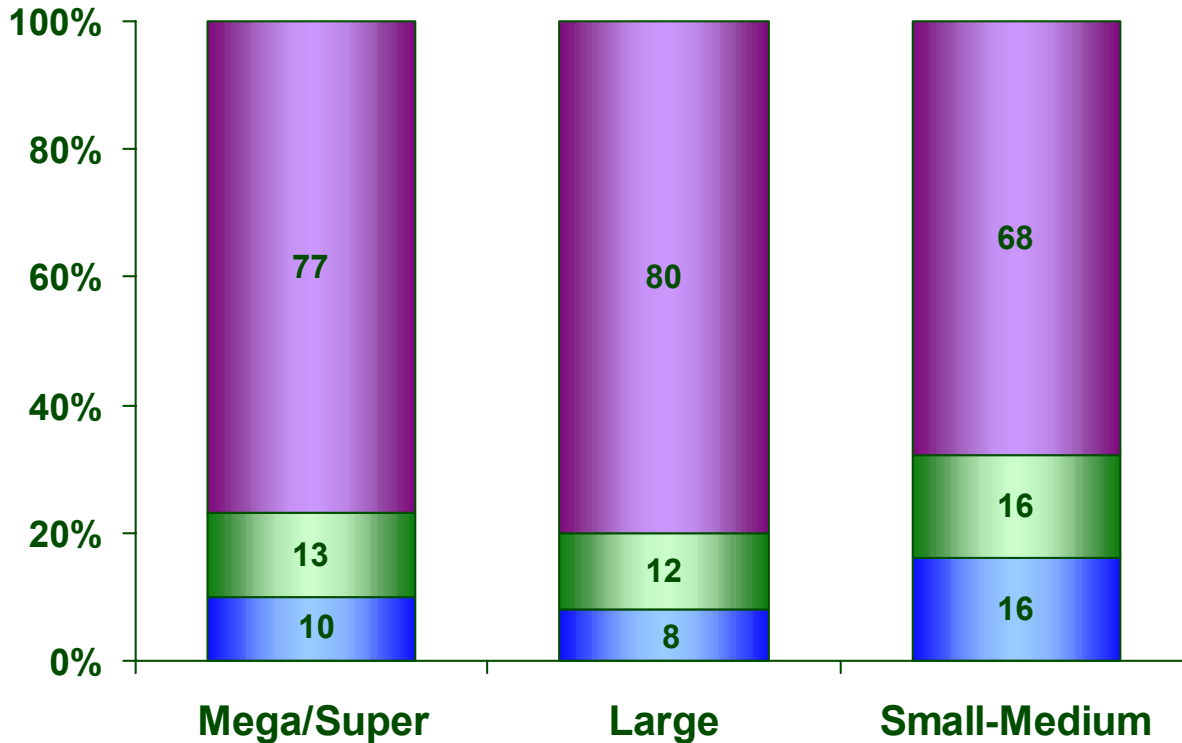
Regional

On Display (n): 23,437
 NEW Label (n): 18,275
 OLD Label (n): 2,941
 NO Label (n): 2,221

7,368
 5,702
 1,050
 616



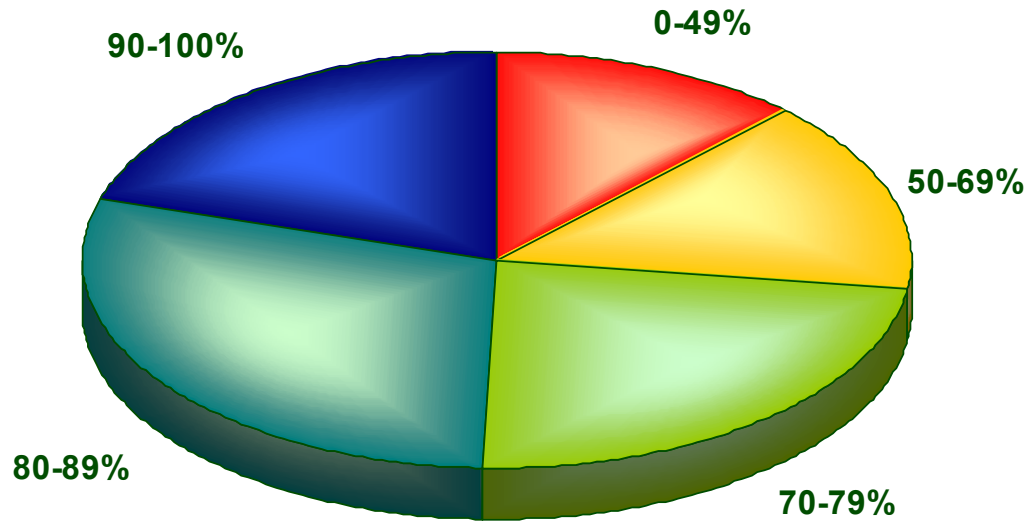
Compliance by Size of Retail Outlet (Total Sample)



On Display (n):	6,902	20,627	3,276
NEW Label (n):	5,314	16,435	2,228
OLD Label (n):	899	2,571	521
NO Label (n):	689	1,621	527



Compliance Range by Retailer (Total Sample) **NAEEEC**



New Label Compliance Range	Number of Retailers (n)	(%)
0 – 49%	49	12
50 – 69%	62	15
70 – 79%	92	23
80 – 89%	118	29
90 – 100%	80	20
Total	401	100%

Note: May not total 100%, due to rounding.

Compliance by Brand

Another important analysis is that of compliance by brand, as the manufacturers are responsible for attaching energy efficiency rating labels to their products prior to distribution. Even though it is the retailer who is ultimately responsible for ensuring that the correct labels are intact, the manufacturer still plays an important support role in the program, ensuring that the information accompanying their products is accurate and up to date.

A number of brands had 100% new label compliance, however, these were of very low incidence ($n < 5$ appliances). As a general observation, it is the performance of the smaller brands that tend to lower the overall average.

Some of the brands with overall compliance well below average (and with incidence of $n > 100$) were: Carrier (29%), Fujitsu (46%), GE (65% - with 19% unlabelled), Hitachi (50%), Kleenmaid/St George (57%), Lemair (30%), Mitsubishi (38%), Panasonic (37%) and Smeg (61%).

Some of the most compliant brands were: Westinghouse (90%), Kelvinator (87%), Hoover (84%), Simpson (83%), Whirlpool (82%) and LG (82%) - all of which had over 1,500 appliances audited. Westinghouse is the clear leader, with 4,460 appliances making it the second most audited brand, followed by Fisher & Paykel, which had 5,575 appliances audited, 79% of which were compliant.



Total Sample Compliance by Brand

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Actron Air	5	40	20	40
AEA	1	0	0	100
AEG	225	90	6	4
Amana	87	56	9	34
Andi	15	67	13	20
Ariston	276	77	14	9
Asko	684	79	12	9
Bendix	324	76	7	16
Blueway	5	0	0	100
Bosch	482	82	11	7
Candy	1	0	100	0
Carrier	156	29	34	37
Chef	7	14	71	14
Cooline	2	0	50	50
Daewoo	39	21	62	18
Daikin	8	13	38	50
DeLonghi	26	15	0	85
Dimplex	21	38	19	43
Dishlex	580	80	11	9
Eleclair	11	0	18	82
Electra	93	19	24	57
Electrolux	14	21	50	29
Emailair	3	100	0	0
Eurolec	13	23	69	8

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Eurotech	45	71	22	7
Fagor	1	100	0	0
Fisher & Paykel	5575	79	16	5
Fujitsu	461	46	32	22
GAC	2	0	100	0
GAF	7	100	0	0
Gaggenau	16	44	6	50
Genaire	1	0	0	100
General Electric (GE)	851	65	16	19
Haier	5	0	20	80
Hitachi	347	50	41	9
Hoover	1878	84	12	5
Hotpoint	16	44	19	38
Hyundai	5	100	0	0
Jenn-Air	120	69	5	26
Kelvinator	2460	87	8	5
Kitchenmaid	2	100	0	0
Kleenmaid/St George	283	57	16	28
Lemair	103	30	40	30
Lennox	8	0	38	63
LG	1955	82	13	5
Liebherr	11	45	0	55
Martec	7	0	0	100
Maytag	738	73	5	22
MD	2	0	50	50

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Midea	2	0	0	100
Miele	668	85	4	10
Misakae		2	0	0
Mitsubishi	288	38	23	39
Mitsubishi Heavy Industrial	9	0	22	78
NEC	718	85	10	5
NEFF	9	67	0	33
Omega	184	68	18	13
Panasonic	287	37	22	41
RCA	1	100	0	0
Samsung	772	74	17	8
Sanyo	3	0	33	67
Simpson	2211	83	12	4
Sharp	94	30	50	20
Smeg	127	61	20	19
Technika	19	53	0	47
Tecnogas	11	0	73	27
Teco	29	3	14	83
Tecoair	4	0	0	100
Thor	141	74	10	16
Toshiba	20	5	50	45
Transtherm	1	100	0	0
Vulcan	2	50	50	0
Westinghouse	4460	90	6	4

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Whirlpool	2173	82	14	5
York	22	14	5	82
Zerowatt	5	60	40	0
Other	428	42	16	42



Clothes Washing Machines



Clothes Washing Machines

Of the 8,383 clothes washing machines included in the study, the overall new label compliance rate was 80%, with just 6% of appliances bearing no label.

As with the overall sample, SA achieved the highest compliance at 87%, with NSW following at 82%, then VIC and QLD at 81% each, and ACT at 80%. SA stores were also the least likely to have unlabelled washing machines on display (3%).

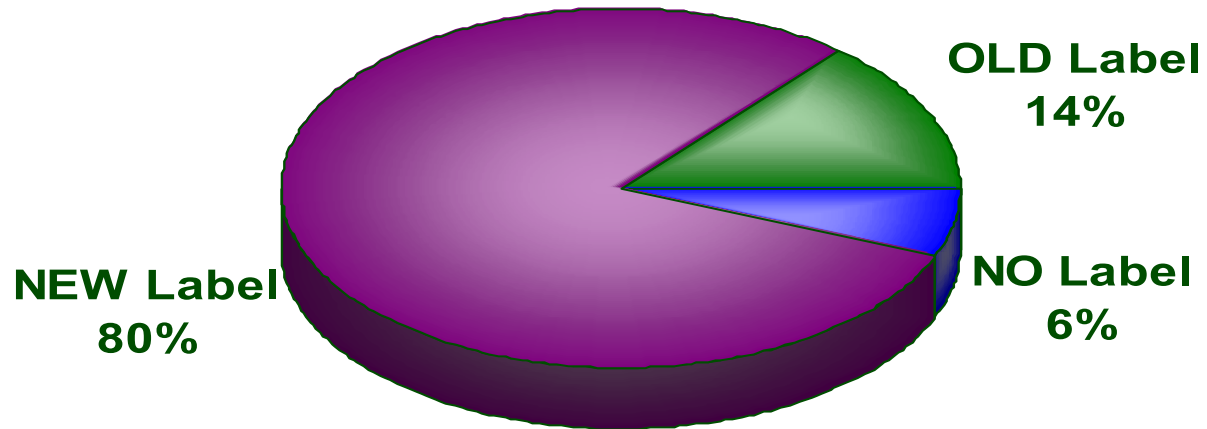
The poorest results were found in NT (57%) and TAS (65%). While the NT sample is quite small, all electrical appliance retail stores in that region were sample. Likewise for the TAS sample, representing most stores in that state.

Amongst the three size categories, the large (81%) and mega/super/department stores (80%) were somewhat more likely to have clothes washing machines on display with the new Energy Efficiency labelling, with small to medium stores measuring 74% compliance .

The manufacturers of clothes washing machines that had compliance noticeably below average were GE, with 61% new, 24% old and 15% unlabelled, and Hitachi, which had 54% new, 39% old and 7% unlabelled.



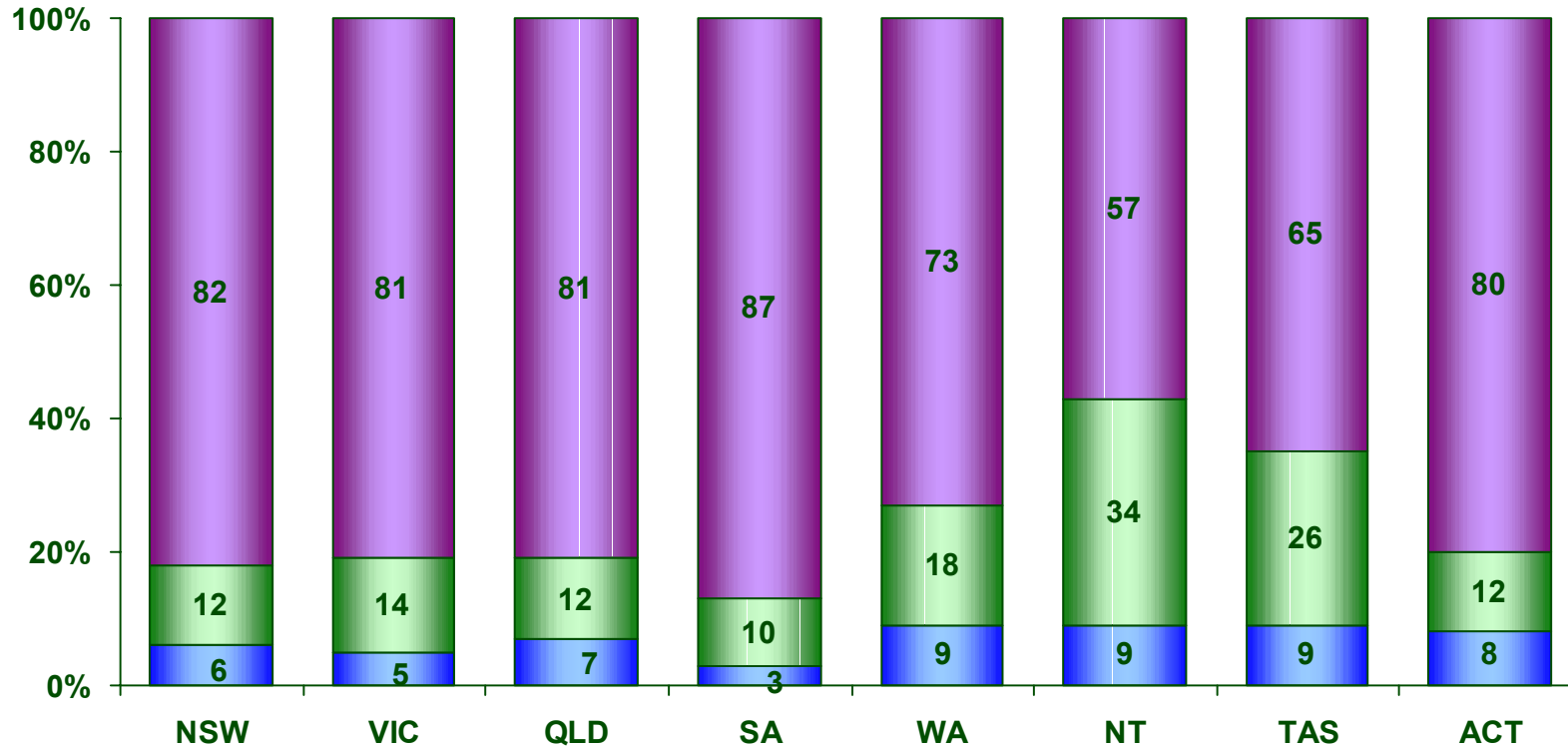
Clothes Washing Machine Compliance



	(N)	(%)
On Display	8,383	100
New Label Compliant	6,690	80
Old Label Compliant	1,176	14
Non-compliant	517	6

Note: May not total 100%, due to rounding.

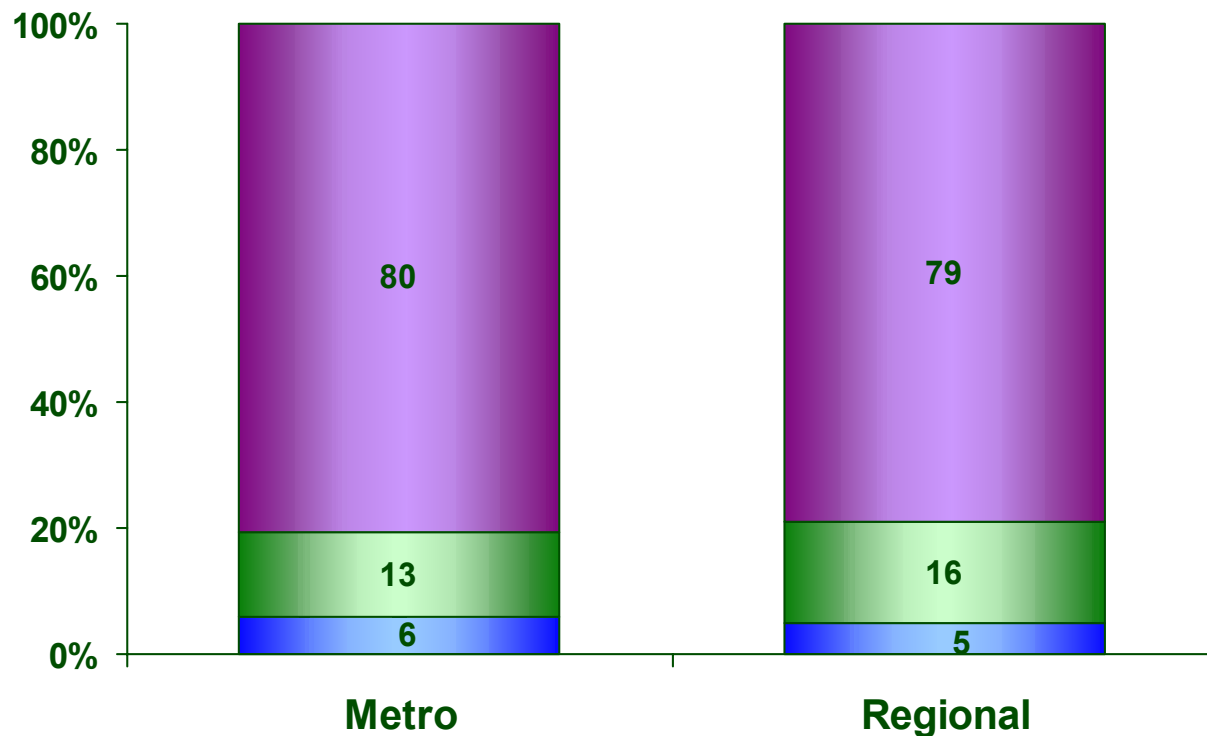
Clothes Washing Machine Compliance by State



	NSW	VIC	QLD	SA	WA	NT	TAS	ACT
On Display (n):	2,187	1,878	1,390	956	811	133	478	449
NEW Label (n):	1,788	1,522	1,126	828	588	76	312	361
OLD Label (n):	271	262	166	99	149	45	124	53
NO Label (n):	128	94	98	29	74	12	42	35

Clothes Washing Machines: Metropolitan vs Regional Compliance

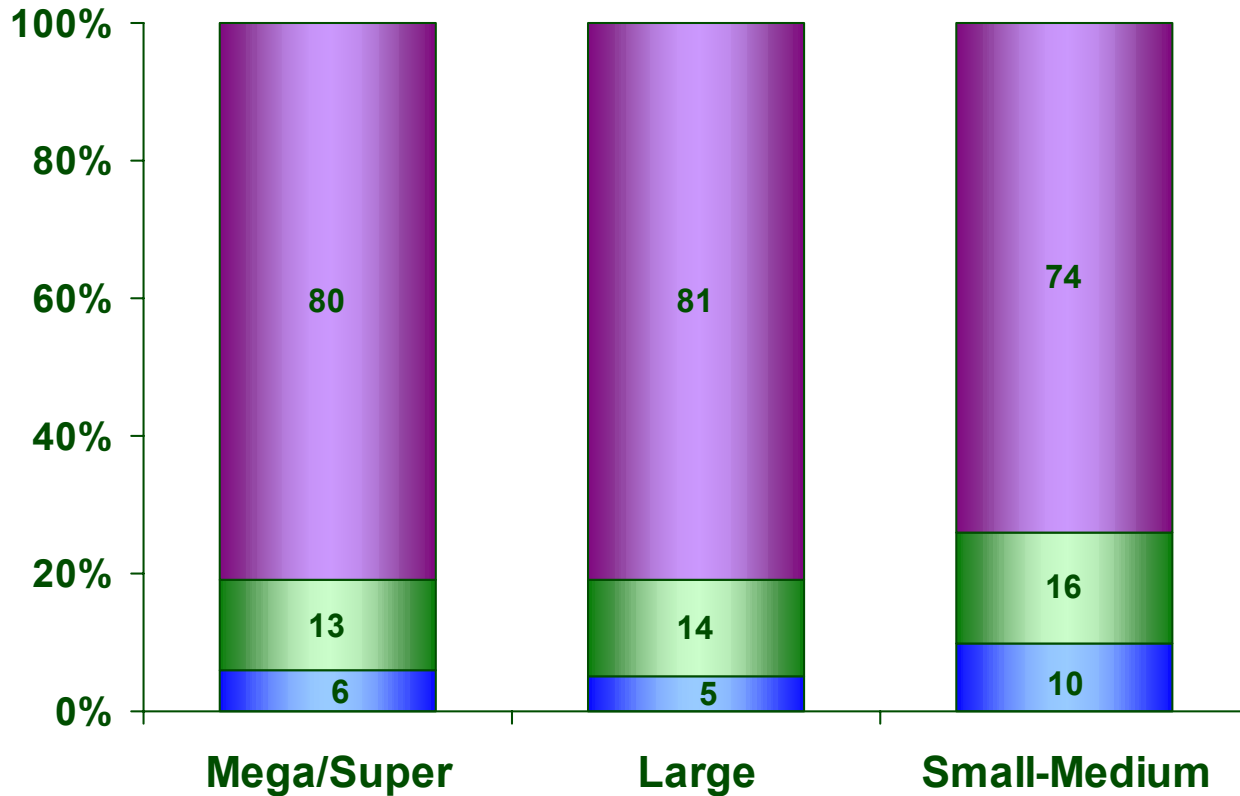
NAEEEC



On Display (n):	6,469	1,914
NEW Label (n):	5,185	1,505
OLD Label (n):	867	309
NO Label (n):	417	100



Clothes Washing Machines by Size of Retail Outlet



	Mega/Super	Large	Small-Medium
On Display (n):	1,728	5,698	957
NEW Label (n):	1,383	4,601	706
OLD Label (n):	233	791	152
NO Label (n):	112	306	99

Clothes Washing Machine Compliance by Brand

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
AEG	106	90	5	6
Ariston	112	75	16	9
Asko	241	84	8	8
Bendix	210	77	9	15
Bosch	190	86	7	7
Daewoo	11	45	55	0
Eurolec	11	9	82	9
Eurotech	35	74	20	6
Fisher & Paykel	1203	78	18	4
General Electric	183	61	24	15
Haier	1	100	0	0
Hitachi	311	54	39	7
Hoover	1187	85	11	4
Kleenmaid/St George	99	65	18	17
LG	648	79	18	3
Maytag	418	75	4	21
Miele	265	94	5	1
NEC	263	90	7	3
Omega	127	69	20	12
Samsung	243	83	14	3
Simpson	1288	86	10	4
Technika Ardo	1	100	0	0
Tecnogas	5	0	80	20
Thor	84	77	11	12

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Westinghouse	106	75	18	8
Whirlpool	965	80	15	5
Zerowatt	5	60	40	0
Other	65	40	29	31



Dishwashing Machines



Dishwashing Machines

Of the 3,875 dishwashing machines included in the study, the overall compliance rate was 77%, with 11% of units not labelled at all.

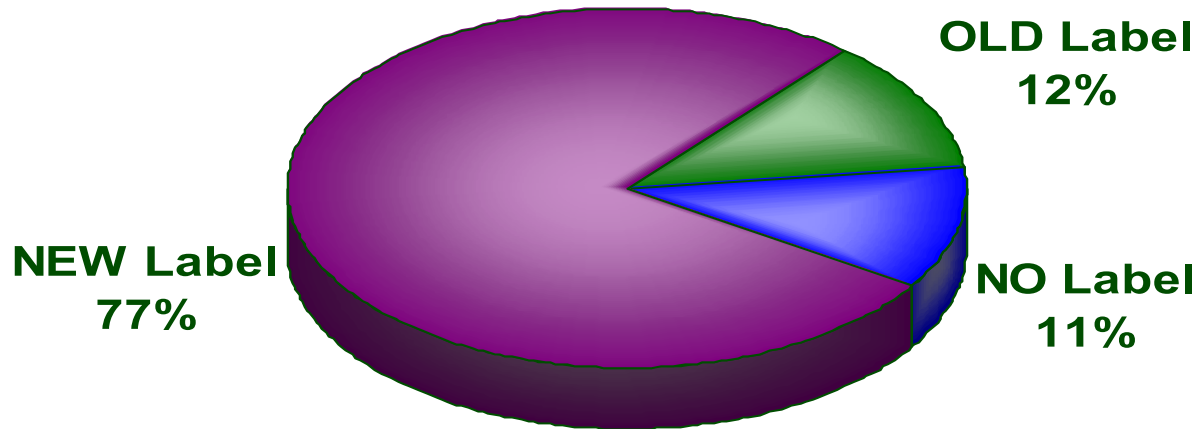
SA again had the highest compliance (85%), followed by QLD, with 81%, then VIC and NT at 78% respectively. NSW, WA and ACT were all roughly on par (74%, 74% and 73% respectively) and TAS was the worst performer, with just 66% of appliances displaying the new label. Dishwashers audited in ACT and TAS also had a high rate of non-compliance, with 17% being unlabelled, in each case.

Among the three size categories, the small - medium stores were considerably less likely to comply (65%), compared with the larger store types, both at the 79% mark.

The primary manufacturer of dishwashing machines with a noticeably poor compliance rating was Smeg, with 61% new, 22% old and 17% with no label.



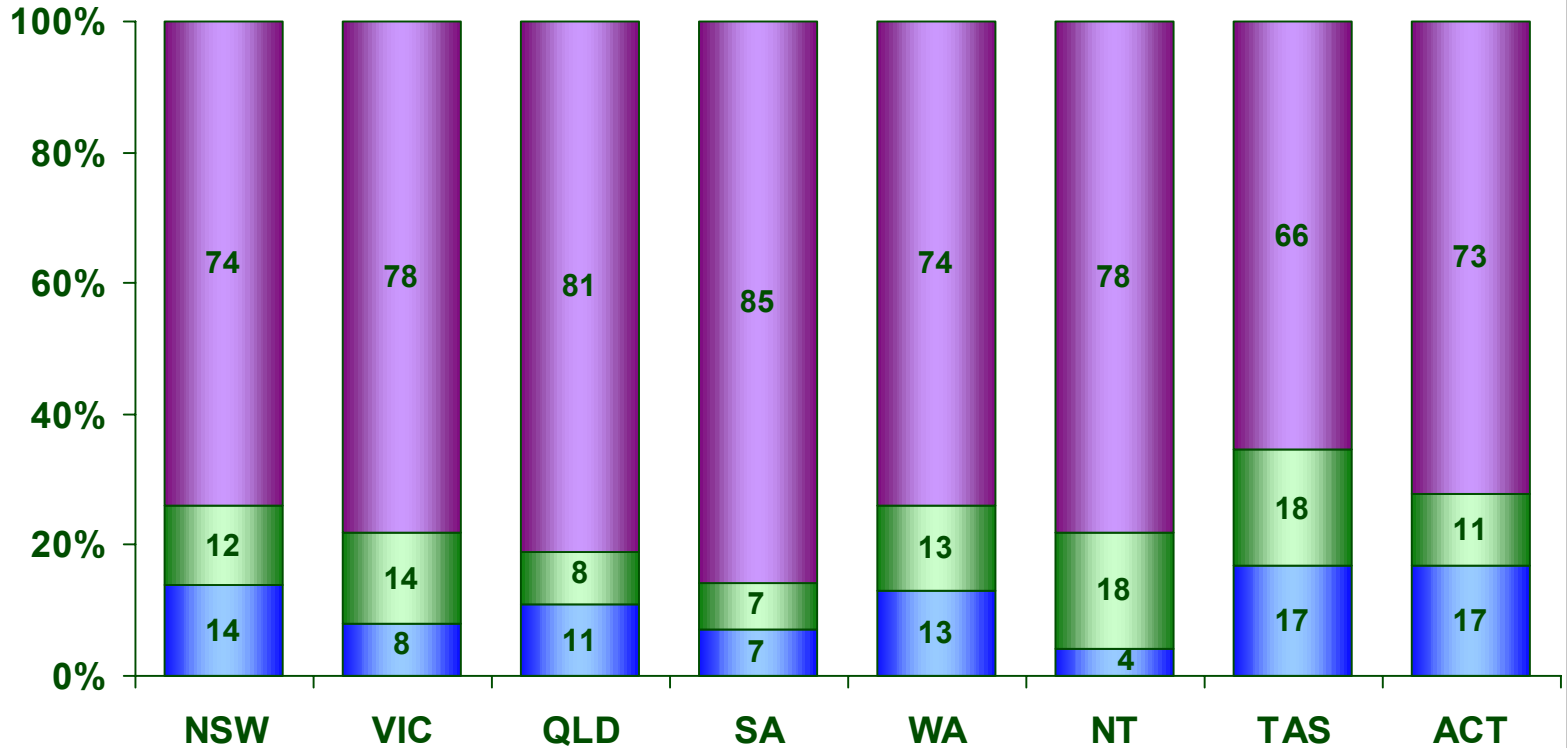
Dishwashing Machine Compliance



	(N)	(%)
On Display	3,875	100
NEW Label	2,976	77
OLD Label	457	12
NO Label	442	11

Note: May not total 100%, due to rounding.

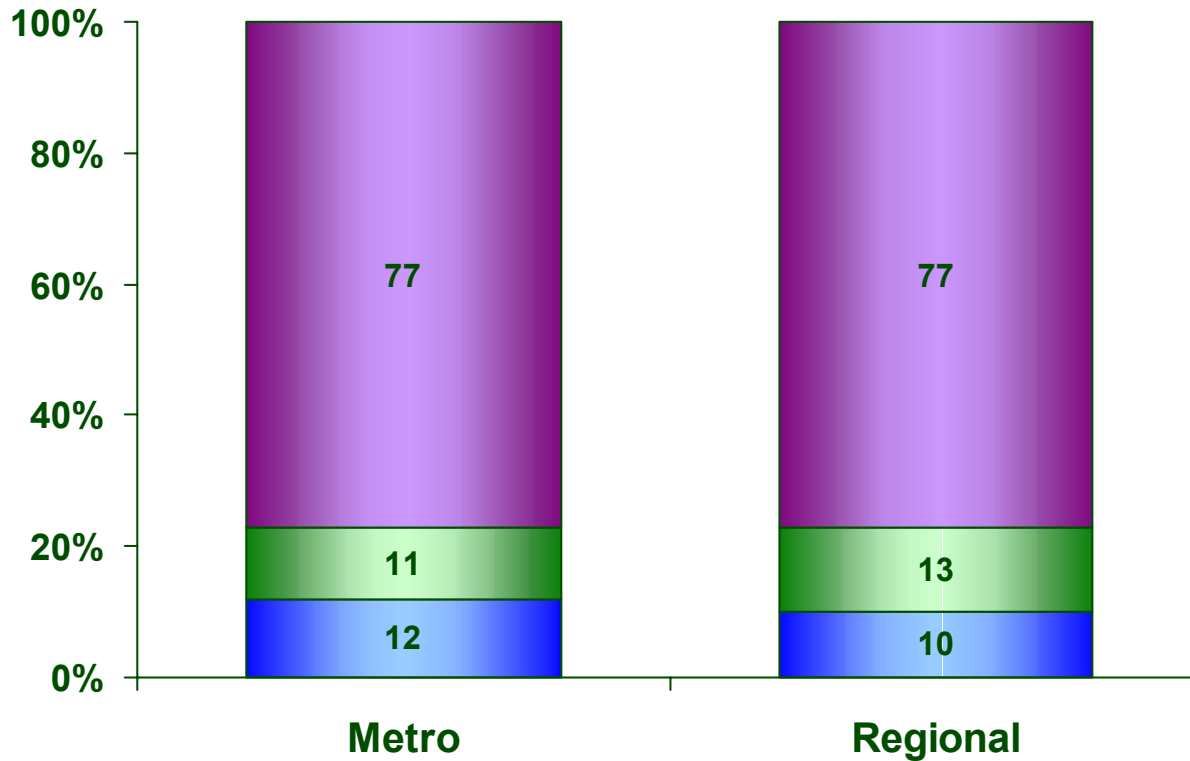
Dishwashing Machine Compliance by State



	NSW	VIC	QLD	SA	WA	NT	TAS	ACT
On Display (n):	950	878	695	375	433	50	227	222
NEW Label (n):	706	681	560	320	319	39	149	161
OLD Label (n):	114	126	56	28	58	9	40	24
NO Label (n):	130	71	79	27	56	2	38	37

Dishwashing Machines: Metropolitan vs Regional Compliance

NAEEEC

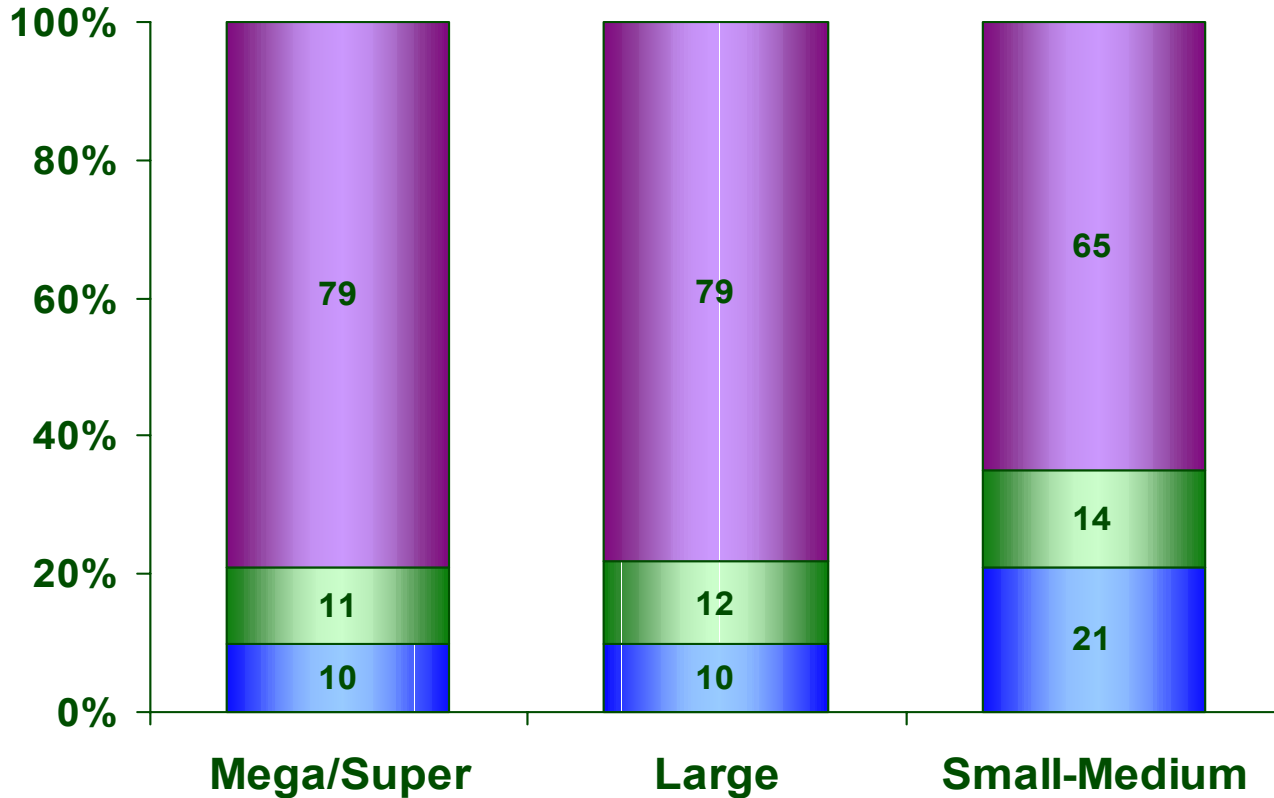


On Display (n):	3,010
NEW Label (n):	2,312
OLD Label (n):	346
NO Label (n):	352

On Display (n):	865
NEW Label (n):	664
OLD Label (n):	111
NO Label (n):	90



Dishwashing Machines by Size of Retail Outlet ^{NAEEEC}



On Display (n):	894	2,420	561
NEW Label (n):	710	1,904	362
OLD Label (n):	95	283	79
NO Label (n):	89	233	120

Dishwashing Machine Compliance by Brand

NAEEEC

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
AEG	85	88	8	4
Andi	15	67	13	20
Ariston	143	80	10	10
Asko	356	77	14	9
Bendix	74	69	4	27
Bosch	202	79	13	8
Chef	7	14	71	14
Dishlex	580	80	11	9
Fagor	1	100	0	0
Electrolnx	11	27	55	18
Fisher & Paykel	605	80	15	5
Fujitsu	2	50	0	50
Gaggenau	15	40	7	53
General Electric	4	50	50	0
Haier	2	0	0	100
Hoover	3	100	0	0
Hotpoint	1	100	0	0
Kelvinator	2	0	0	100
Kitchenmaid	2	100	0	0
Kleenmaid/St George	68	51	15	34
LG	88	99	1	0
Miele	293	76	3	21
Neff	9	67	0	33
Omega	43	74	7	19

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Panasonic	1	0	100	0
Samsung	1	100	0	0
Simpson	242	86	10	4
Smeg	117	61	22	17
Technika	18	50	0	50
Technogas	2	0	0	100
Thor	35	66	3	31
Westinghouse	413	86	10	3
Whirlpool	270	75	17	7
Vulcan	2	50	50	0
Other	163	44	12	45



Air Conditioners



Air Conditioners

Of the 2,108 air conditioners included in the study, the overall compliance rate was 36%, which is particularly poor. However, this indicates an improvement since Stage One of the audit, wherein this category achieved only 30% compliance.

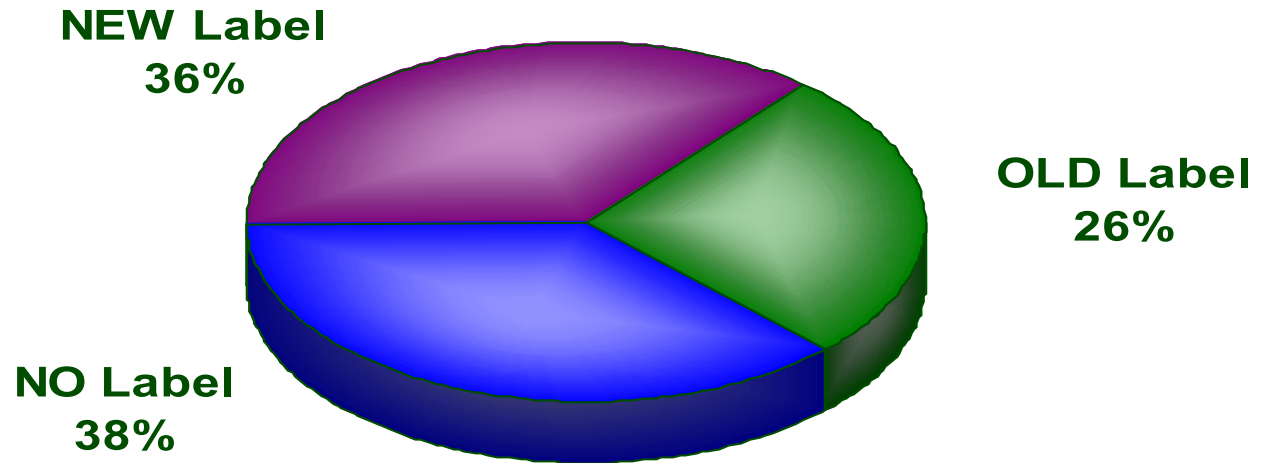
Within this appliance category, Adelaide stores again had the highest compliance level of 56%, albeit well below the national average. Interestingly, the next best performer was NT, with 42% compliance. Conversely, the ACT and Tasmania fared poorly, with 15% and 22% compliance respectively - and the majority of units in both regions being unlabelled altogether.

Amongst the three size categories, the small - medium stores tend to be the least compliant, with 24% overall compliance, as opposed to the two larger store types, both categories achieving 38% compliance.

The manufacturers of air conditioners which had a noticeably poor compliance rating compared with other manufacturers were; Carrier (29%), Fujitsu (46%), Kelvinator (56%), LG (51%) Mitsubishi Electric (25%), Panasonic (32%) and Samsung (28%). These findings are relatively consistent with those of the 2000 snapshot audit and it is interesting to note that this group includes some of the best overall performers.



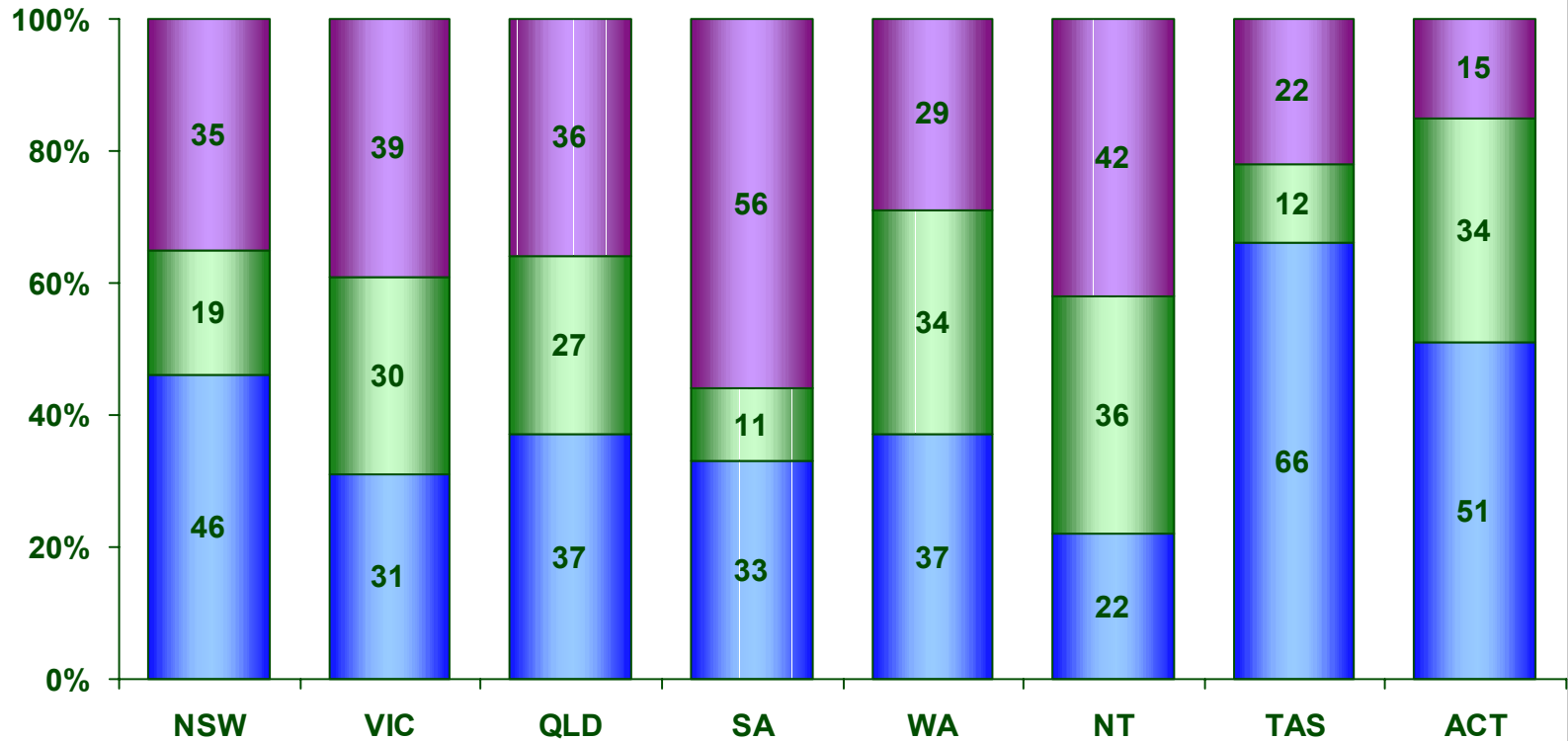
Air Conditioner Compliance



	(N)	(%)
On Display	2,108	100
New Label Compliant	764	36
Old Label Compliant	555	26
Non-compliant	789	37

Note: May not total 100%, due to rounding.

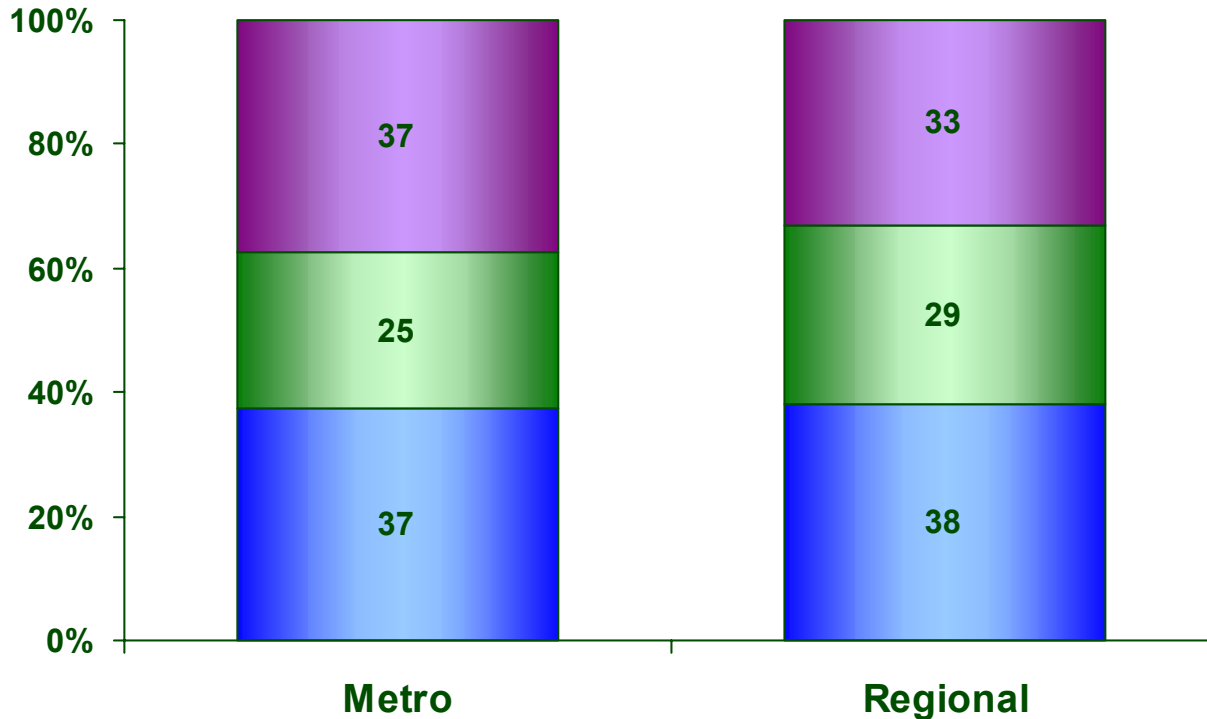
Air Conditioner Compliance by State



	NSW	VIC	QLD	SA	WA	NT	TAS	ACT
On Display (n):	425	497	467	143	286	125	41	87
NEW Label (n):	148	194	169	80	84	52	9	13
OLD Label (n):	82	151	124	16	96	45	5	30
NO Label (n):	195	152	174	47	106	28	27	44

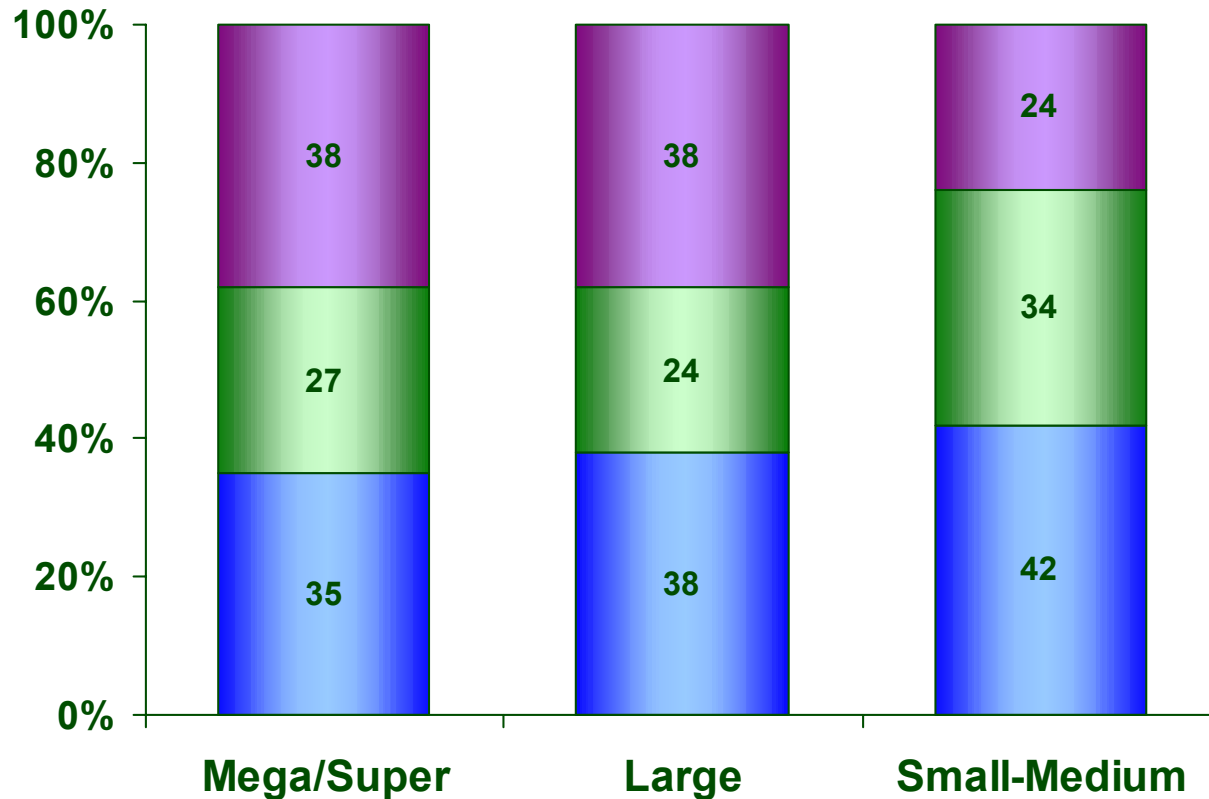
Air Conditioners: Metropolitan vs Regional Compliance

NAEEEC



On Display (n):	1,529	579
NEW Label (n):	571	193
OLD Label (n):	389	166
NO Label (n):	569	220

Air Conditioner Compliance by Size of Retail Outlet



	Mega/Super	Large	Small-Medium
On Display (n):	639	1,219	250
NEW Label (n):	240	464	60
OLD Label (n):	173	296	86
NO Label (n):	226	459	104



Air Conditioner Compliance by Brand

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Actron Air	5	40	20	40
AEA	1	0	0	100
Blueway	5	0	0	100
Carrier	156	29	34	37
Cooline	2	0	50	50
Daewoo	12	8	33	58
Daikin	8	13	38	50
DeLonghi	26	15	0	85
Dimplex	21	38	19	43
Elecair	11	0	18	82
Electra	93	19	24	57
Emailair	3	100	0	0
Fujitsu	459	46	32	22
Genaire	1	0	0	100
General Electric	12	17	33	50
Hitachi	36	22	56	22
Hotpoint	15	40	20	40
Hyundai	5	100	0	0
Kelvinator	222	56	23	21
Lennox	8	0	38	63
LG	242	51	25	24
Martec	7	0	0	100
Midea	2	0	0	100
Misake	2	0	0	100



BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Mitsubishi Electric	187	25	22	52
Mitsubishi Heavy IND (MHI)	9	0	22	78
MD	2	0	50	50
NEC	41	61	20	20
Panasonic	242	32	21	47
Samsung	123	28	33	42
Sanyo	3	0	33	67
Sharp	20	5	35	60
Teco	29	3	14	83
Tecoair	4	0	0	100
Toshiba	20	5	50	45
York	22	14	5	82
Westinghouse	9	67	22	11
Other	39	100	13	74



Refrigerators and Freezers



Refrigerators and Freezers

Of the 13,774 refrigerators and freezers included in the study (the largest appliance category by far), the overall compliance rate was 84%, with 7% of appliances still unlabelled.

Within the refrigerators and fridge freezers evaluated in each area, SA was once again the top performer, with 91% compliance. VIC and QLD follow relatively closely, with 86% each, then NSW and ACT at 83%. The poorest result in this category was found in NT, which had just 67% of units with the new label and a high 12% with no label.

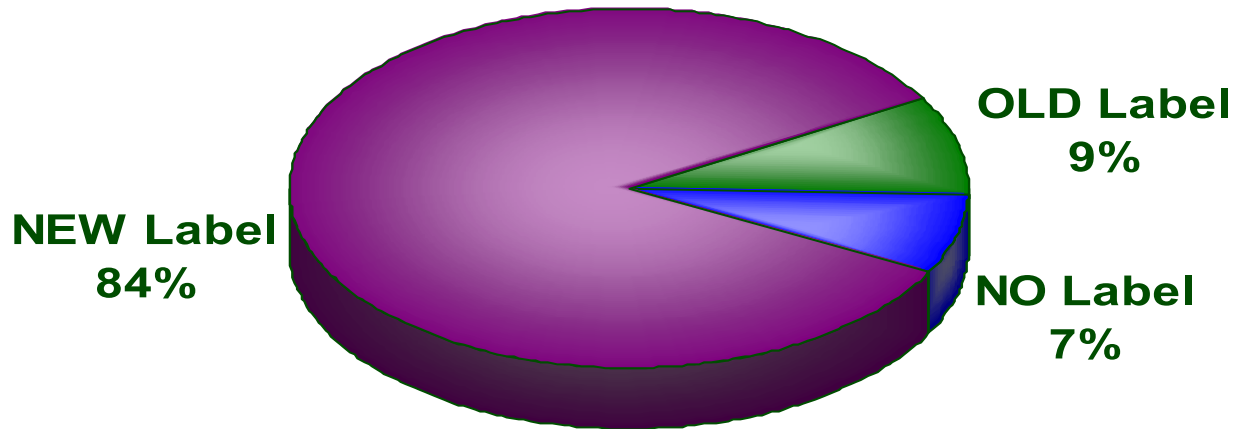
Among the three size categories, the large stores were the best performers, with 85% compliance, followed by the mega/super/department stores (82%) and the small-medium stores at 75%. This latter category was also twice as likely as the previous two to have fridges and freezers with no label at all (14%).

The manufacturers of refrigerators and freezers with noticeably lower compliance ratings compared with other manufacturers were Mitsubishi Electric (62%) and Lemair (30%), which is a similar finding to that of the 2000 audit.



Refrigerators and Freezer Compliance

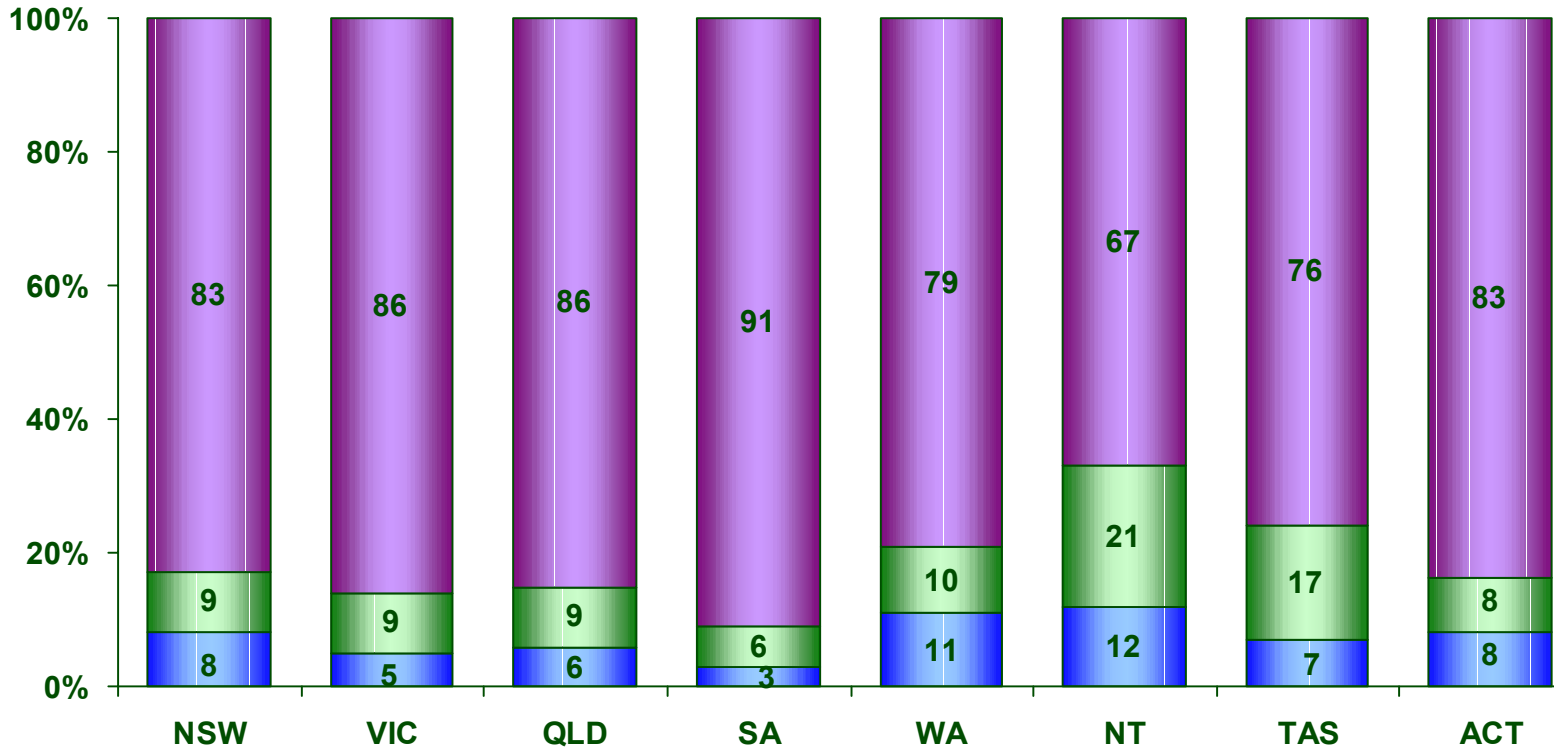
NAEEEC



	(N)	(%)
On Display	13,774	100
New Label Compliant	11,534	84
Old Label Compliant	1,306	9
Non-compliant	934	7

Note: May not total 100%, due to rounding.

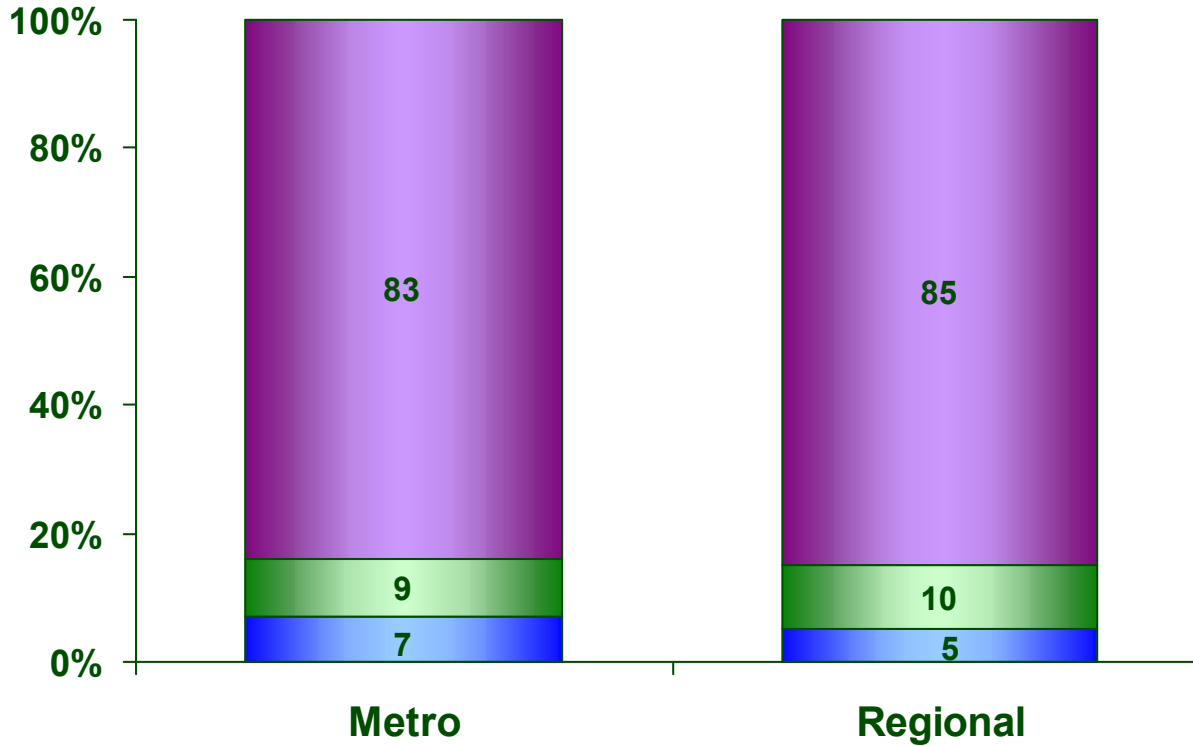
Fridge/Freezer Compliance by State



	NSW	VIC	QLD	SA	WA	NT	TAS	ACT
On Display (n):	3,349	3,136	2,494	1,283	1,356	382	892	663
NEW Label (n):	2,789	2,699	2,133	1,170	1,068	256	676	552
OLD Label (n):	288	286	213	76	136	80	154	56
NO Label (n):	272	151	148	37	152	46	62	55

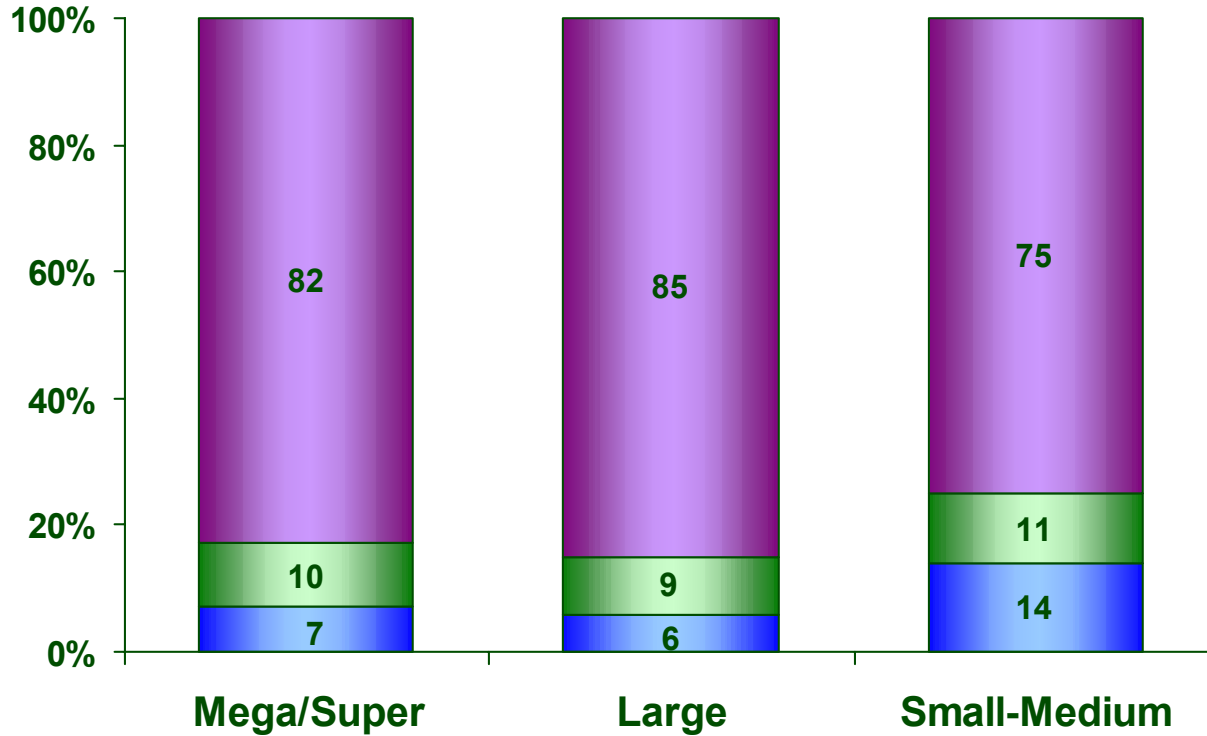
Fridges/Freezers: Metropolitan vs Regional Compliance

NAEEEC



On Display (n):	10,356	3,418
NEW Label (n):	8,620	2,914
OLD Label (n):	975	331
NO Label (n):	761	173

Fridge/Freezer Compliance by Size of Retail Outlet



On Display (n):	3,145	9,460	1,169
NEW Label (n):	2,592	8,069	873
OLD Label (n):	318	857	131
NO Label (n):	235	534	165

Fridge/Freezer Compliance by Brand

NAEEEC

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Asko	1	100	0	0
Amana	87	56	9	34
Bosch	5	60	40	0
Daewoo	16	13	88	0
Fisher & Paykel	3,134	80	14	7
GAC	2	0	100	0
GAF	7	100	0	0
Gaggenau	1	100	0	0
General Electric (GE)	632	68	12	20
Haier	2	0	0	100
Hoover	10	40	30	30
Jenn-Air	120	69	5	26
Kelvinator	2,236	91	6	3
Kleenmaid	71	61	10	30
Lemair	103	30	40	30
LG	977	91	7	1
Liebherr	11	45	0	55
Maytag	314	71	7	22
Mitsubishi Electric	101	62	23	15
NEC	414	84	11	5
Omega	2	50	50	0
Panasonic	44	68	25	7
RCA	1	100	0	0
Samsung	401	85	14	1
Sharp	74	36	54	9

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
Simpson	13	69	15	15
Smeg	10	60	0	40
Transtherm	1	100	0	0
Westinghouse	3,932	91	5	4
Whirlpool	939	85	11	4
Other	108	44	7	48



Clothes Dryers



Clothes Dryers

Of the 2,665 clothes dryers audited in the study, the overall compliance rate was 76%. While only 6% of clothes dryers were found to be unlabelled, almost one in five (18%) still had the pre-2000 compliant label attached.

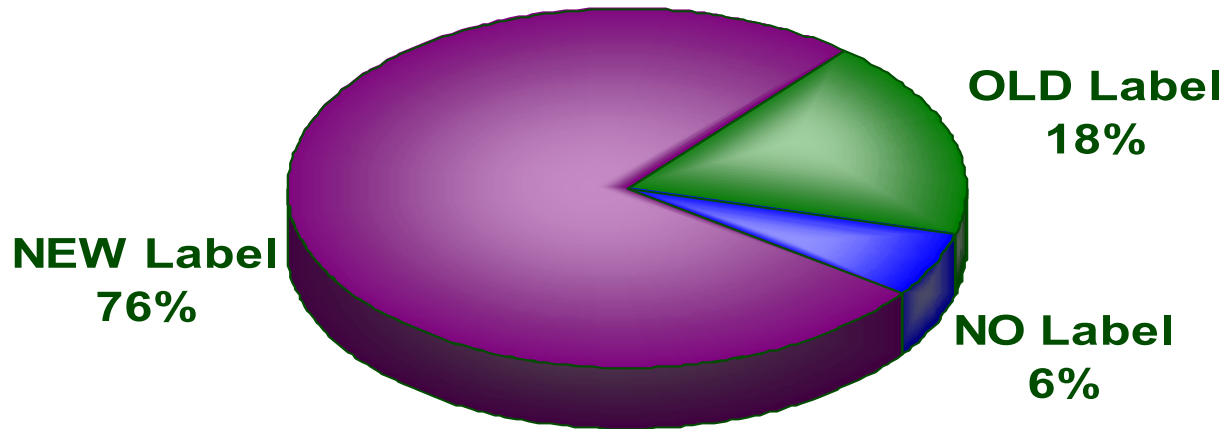
Within this appliance segment, SA excelled with 85% compliance, followed by NSW (78%), VIC and QLD (both 77%), then WA and ACT (both 72%). In contrast, TAS and NT achieved the lowest compliance levels (58% and 63% respectively).

Amongst the three size categories the small-medium stores again proved to be less likely to be compliant to the label change and the program in general, with 67% of appliances bearing the new label and 12% being unlabelled.

The manufacturer of clothes dryers with the lowest compliance rating was Whirlpool (62%).



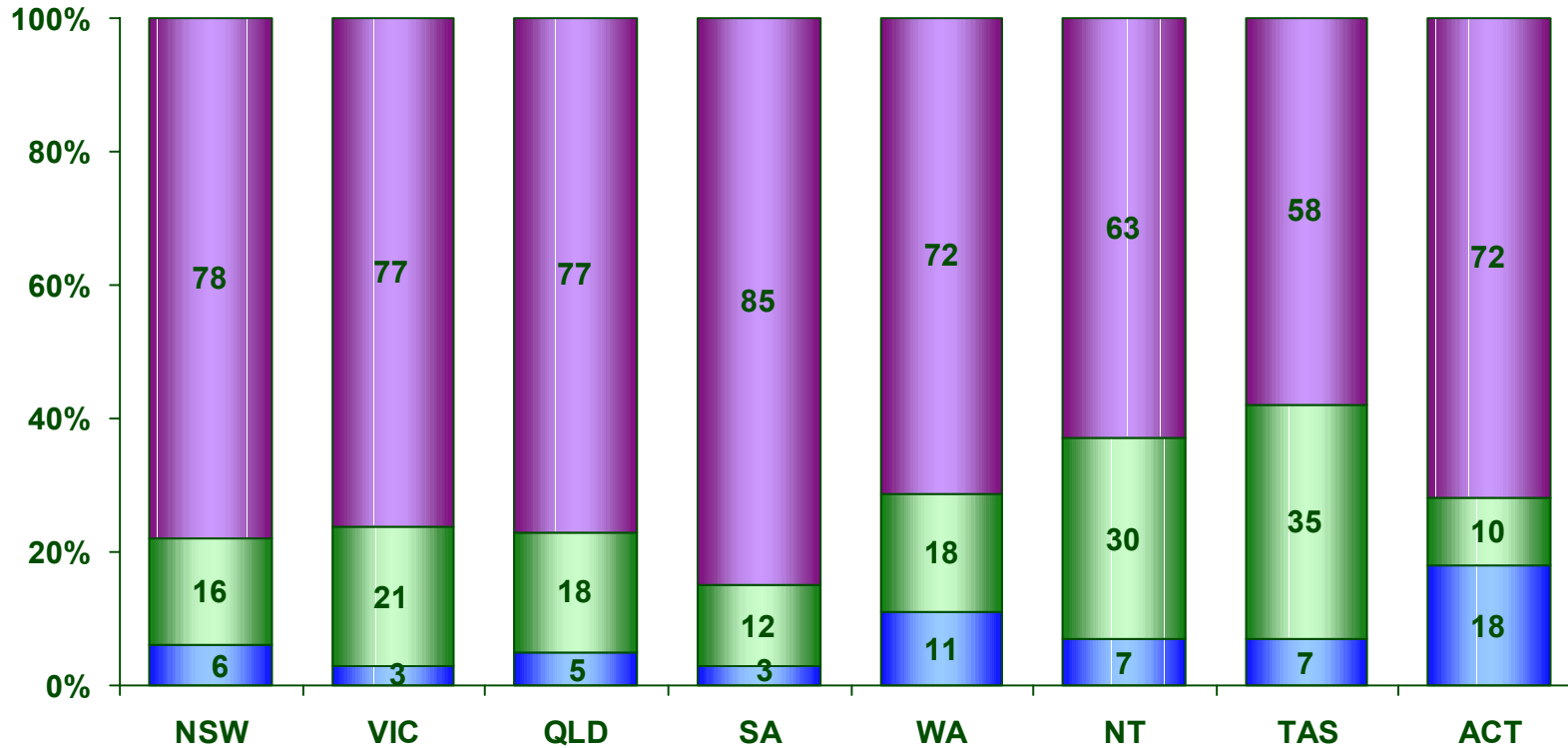
Clothes Dryer Compliance



	(N)	(%)
On Display	2,665	100
New Label Compliant	2,013	76
Old Label Compliant	497	19
Non-compliant	155	6

Note: May not total 100%, due to rounding.

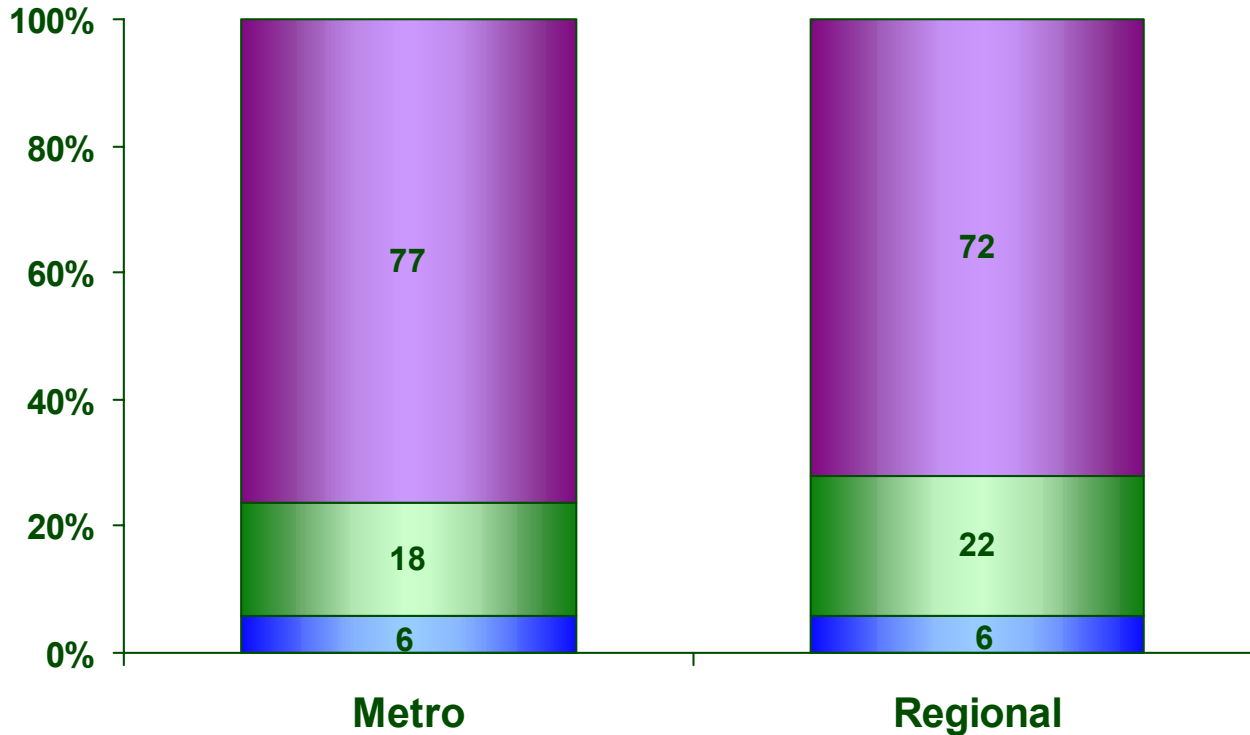
Clothes Dryer Compliance by State



	NSW	VIC	QLD	SA	WA	NT	TAS	ACT
On Display (n):	696	637	418	225	276	92	167	120
NEW Label (n):	543	489	322	192	198	58	97	86
OLD Label (n):	110	132	75	27	49	28	59	12
NO Label (n):	43	16	21	6	29	6	11	22

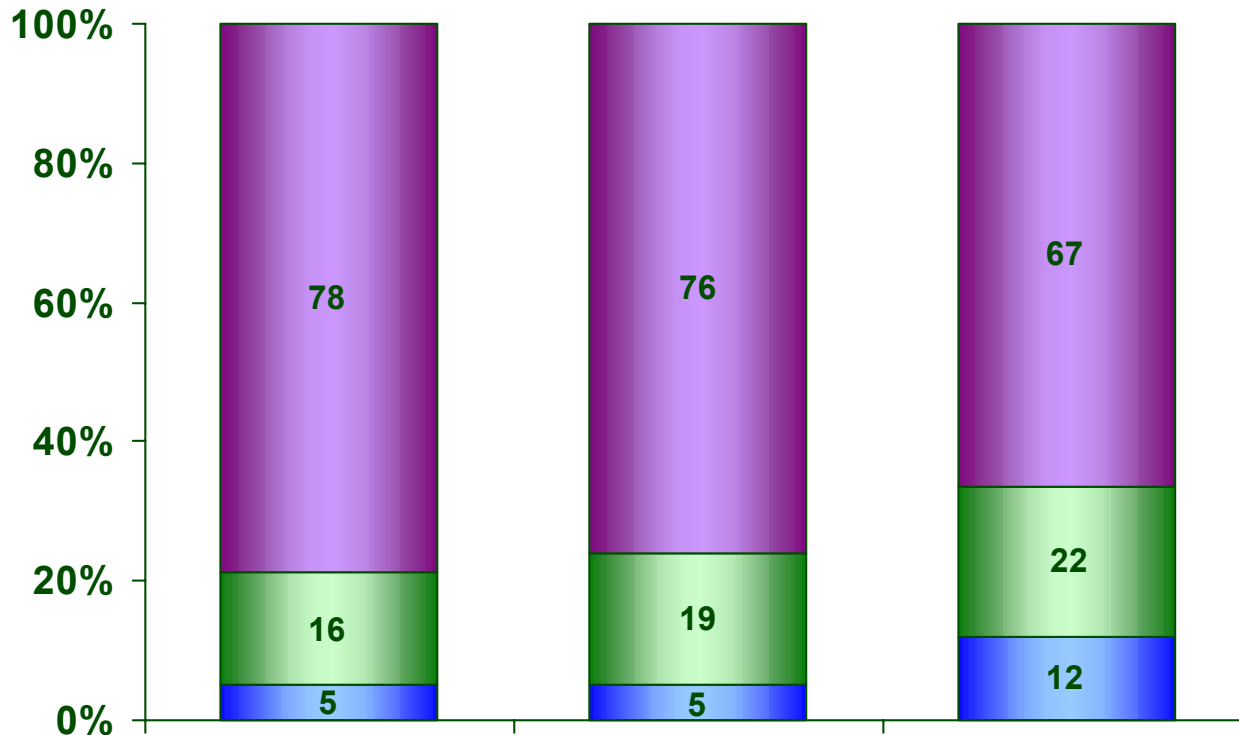
Clothes Dryers: Metropolitan vs Regional Compliance

NAEEEC



On Display (n):	2,073	592
NEW Label (n):	1,587	426
OLD Label (n):	364	133
NO Label (n):	122	33

Clothes Dryer Compliance by Size of Retail Outlet



Mega/Super

Large

Small-Medium

On Display (n):

496

1,830

339

NEW Label (n):

389

1,397

227

OLD Label (n):

80

344

73

NO Label (n):

27

89

39



Clothes Dryer Compliance by Brand

NAEEEC

BRAND	ON DISPLAY (N)	NEW LABEL (%)	OLD LABEL (%)	NO LABEL (%)
AEG	34	97	3	0
Ariston	21	67	29	5
Asko	86	76	14	10
Bendix	40	88	8	5
Bosch	85	82	15	2
Candy	1	0	100	0
Electrolux	3	0	33	67
Eurolec	2	100	0	0
Eurotech	10	60	30	10
Fisher & Paykel	628	72	24	4
General Electric	20	50	35	15
Hoover	678	82	13	5
Kleenmaid	45	40	20	40
Maytag	6	67	0	33
Miele	110	90	5	5
Omega	12	50	42	8
Simpson	668	77	19	4
Tecnogas	4	0	100	0
Thor	22	73	18	9
Whirlpool	137	62	28	9
Other	53	55	36	9

Comparative Analysis

with Previous Audits



A Comparison of 1998, 2000 and 2001 Audits

NAEEEC

The following charts illustrate a comparative analysis with the 1998 audit and the 2000 and 2001 stages of this particular study. Results are presented in terms of both the proportion and incidence of the 'new' labelled appliances (post-2000 compliant), the 'old' labelled appliances (pre-2000 compliant), and the unlabelled appliances.

As the 1998 methodology was different in some respects, it is inappropriate to provide an analysis on two particular aspects. These include metropolitan versus regional compliance (due to the lack of regional stores in '98), as well as compliance by store size (due to a different approach to categorising stores in '98). However, all other comparisons with that study are provided, including that of compliance by total sample, by appliance type, by State/Territory (as appropriate), as well as by the top nine most audited brands (where these correlated across all three waves).

The first chart indicates that retailer awareness of the energy efficiency labelling program continues to be high, and that compliance to the label change has improved since November 2000. However, as the aim is to achieve 100% compliance, there is still a need for on-going improvement and education. This is particularly evident as the proportion of unlabelled appliances has remained relatively stable over three waves of auditing.

There has been a reasonably healthy improvement in compliance for washing machines since November 2000, from 72% to 80%. Although this category is one of the better performers, considerable improvement is still required in order for retailers to attain full compliance, or at least equivalent to the impressive 95% level observed in the '98 audit.

In terms of dishwashing machines, while compliance to the label change is stable (77%), a slight decline in performance is evident, particularly in terms of unlabelled units, which increased marginally from 8% to 11%.

Since 2000, compliance in the air conditioner category improved in one respect (from 30% to 36%), although the rise in unlabelled appliances (from 33% to 37%) counters this finding somewhat. However, this result is slightly more favourable than the one observed in '98, wherein 39% of air conditioners were found to have no energy efficiency rating label.

The greatest improvement in compliance over the last six months is found in the refrigerator/freezer category (from 76% in 2000 to 84% in 2001), which may be considered encouraging, as this is the most popular appliance of the five categories. Compliance has not increased to the level observed in the audit of '98, though, which was on par with that of clothes washers at 95%.

Some improvement is evident within the clothes dryer segment, with compliance increasing from 72% in 2000 to 76% in 2001. There are certainly fewer of the non-compliant labels on display (23% cf. 19%), however, the number of unlabelled appliances has increased by one percent each wave (from 4% to 6%). This category was the most compliant in '98, with 96%, and considerable effort will be required to ensure that this can be replicated in future.

From 2000 to 2001, compliance has improved in NSW, VIC and QLD, with all three states now at 79%. This result was the most dramatic in Victoria, where compliance was measured at 66% last year. It is also pleasing that the number of unlabelled appliances in this State has dropped from 9% in 2000 to 7% (although not to the 4% level found in '98).

The slight rise in the number of unlabelled appliances in Queensland could be due to the inclusion of stores from a wider variety of regional locations, which is a more representative measure of compliance in that State than has been taken in any of the previous audits. Compliance in NSW has shown healthy improvement, with a drop in both old- and non-labelled appliances.

Results from the 1998 and 2001 audits have been used to measure changes in performance over time in the remaining States and Territories, as the 2000 audit was conducted in NSW, VIC and QLD only. Of these regions, SA is the only other region wherein the number of unlabelled appliance has fallen (from 8% to 5%). WA remained relatively stable (12% cf. 13%) in this respect, whereas performance in NT, TAS and ACT has dropped, most noticeably in the latter region (from 5% to 13% non-compliance).

A healthy improvement is measured in compliance among stores sampled in regional areas of NSW, VIC and QLD - from 65% to 77% overall and with a solid drop in the number of both unlabelled and old-labelled appliances. In these three states, there has also been some considerable improvement within the metropolitan sample. No regional stores were audited in '98, hence the comparison only being provided in relation to Stages One and Two of the most recent audit.

From 2000 to 2001, improvements in compliance are observed across all store size categories, most noticeably so in the large stores (69% to 80%), which is commendable as the category comprises 59% of the total store sample. Compliance for small to medium stores continues to be observed at lower levels and is currently at 68%, with the proportion of unlabelled appliances increasing from 11% to 16%. Performance among the mega/super store category has shown marginal improvement in terms of conversion from old to new label (almost 2%), however the proportion of unlabelled appliances remains constant at 10%.

When considering compliance by individual retailer, the majority of stores shifted from the 50-70% compliance range in 2000 to the 80-100% range in 2001. However, it is clear that performance is substantially below the 1998 benchmark level, wherein over three quarters of stores were 90-100% compliant.

It is noteworthy that while 15 of the stores audited in 2001 were 100% compliant, versus zero in 2000, a far greater number of stores achieved this result in 1998 – a total of 89. To be commended in the 1998 study were a number of Myer/Grace Bros, David Jones, Harvey Norman, Chandlers and Retravisation chain stores, as well as a range of smaller, independent retailers. In 2001, these were mostly in the small to medium store size category and included 5 Myer / Grace Bros, 3 Betta Electrical, 1 Carrier and 1 Gasmart.

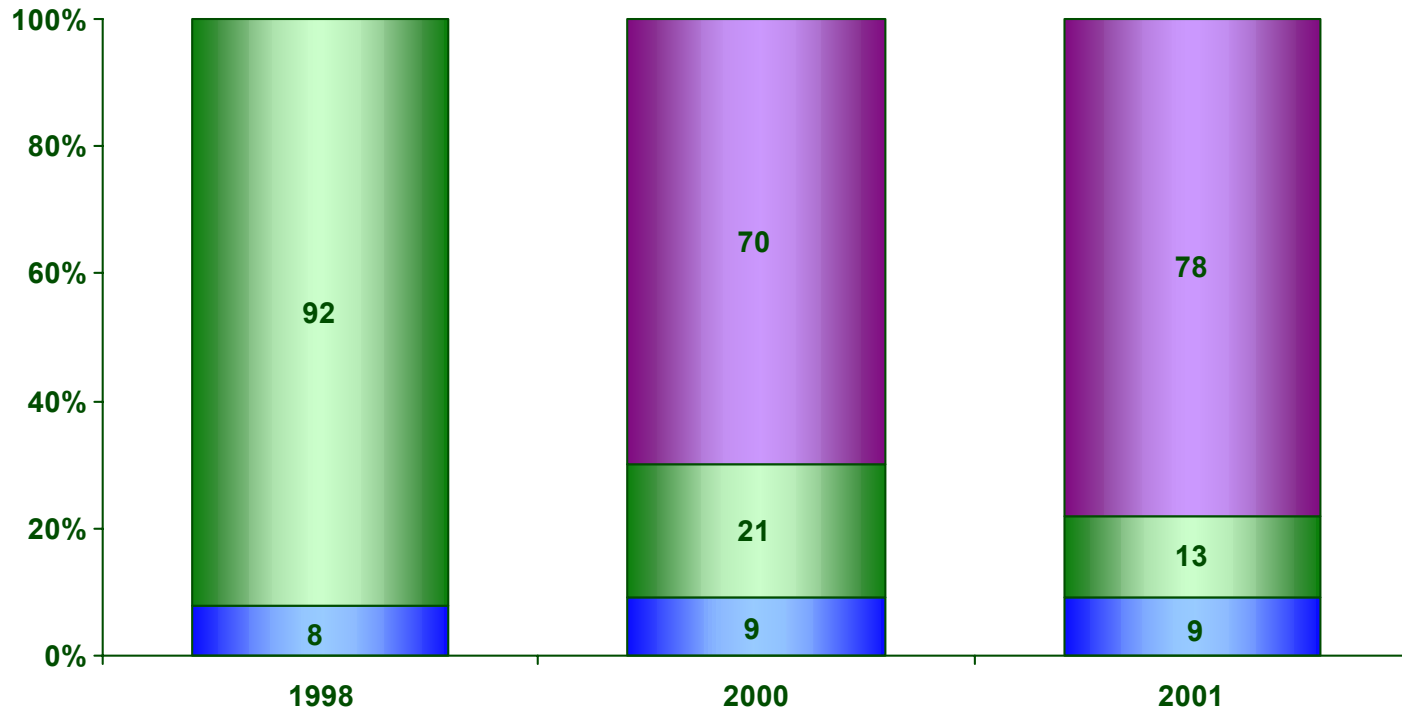
Conversely, 18 stores had zero compliance on 2001, all of these being in the small to medium category, including 5 Carrier and 4 Gasmart stores (compared with just one store in '98 and none in '00). This indicates that the goal of 100% is certainly achievable for any store, although greater focus is required to ensure that the impressive results of 1998 are again realised.

Also provided is a comparison of the performance of the nine most popular brands on display in retail stores across all three audits. Westinghouse is the current top performer, with 90% correctly labelled and just 4% unlabelled, followed by Kelvinator (87%), Hoover (84%), Simpson (with the most dramatic improvement from 67% in 2000 to 83% in 2001) and then LG and Whirlpool (82% respectively). Surprisingly, some of the better performers in '98 appear to have lost ground since then, with one in particular, namely Asko, having dropped considerably (from 97%, to 85% in 2000 and now to 79%). GE has had minimal improvement, but is still performing at a level below the national average (at 65%).

Considering these comparative analyses, it could be said that while most manufacturers and retailers are making concerted efforts to comply with the National Energy Efficiency Labelling program, some assistance is required to ensure that the improvement observed herein continues, in order for the program to fulfil its objectives.



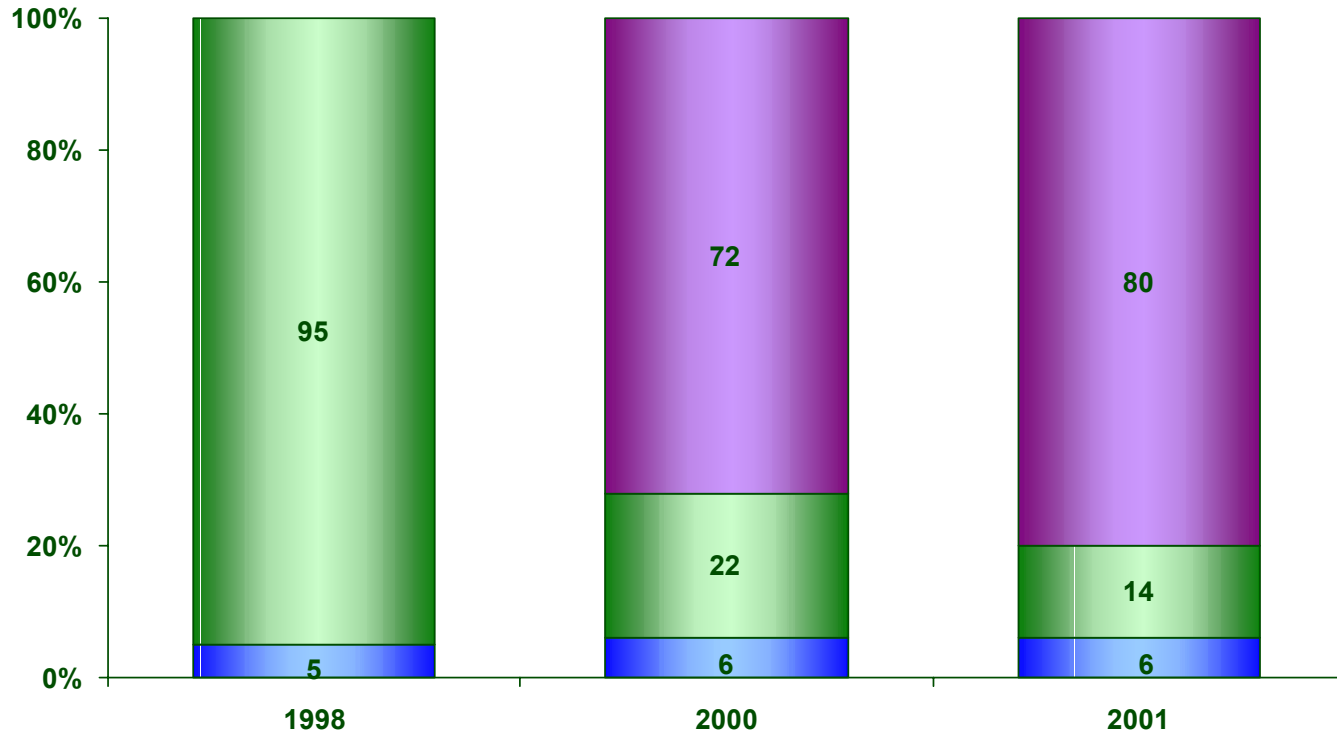
Total Sample Compliance (1998, 2000, 2001)



On Display (n):	29,024	14,568	30,805
NEW Label (n):	N/A	10,258	23,977
OLD Label (n):	26,788	2,980	3,991
NO Label (n):	2236	1,330	2,837

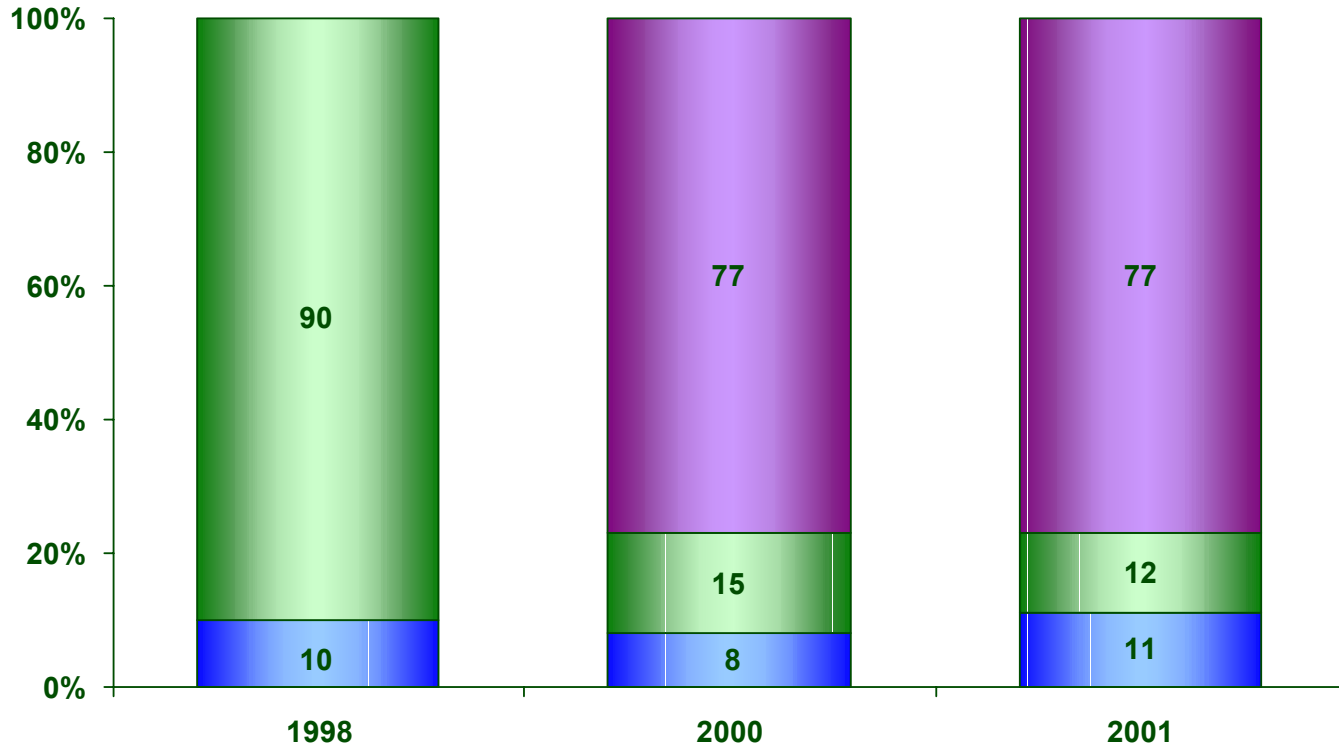


Clothes Washing Machine Compliance



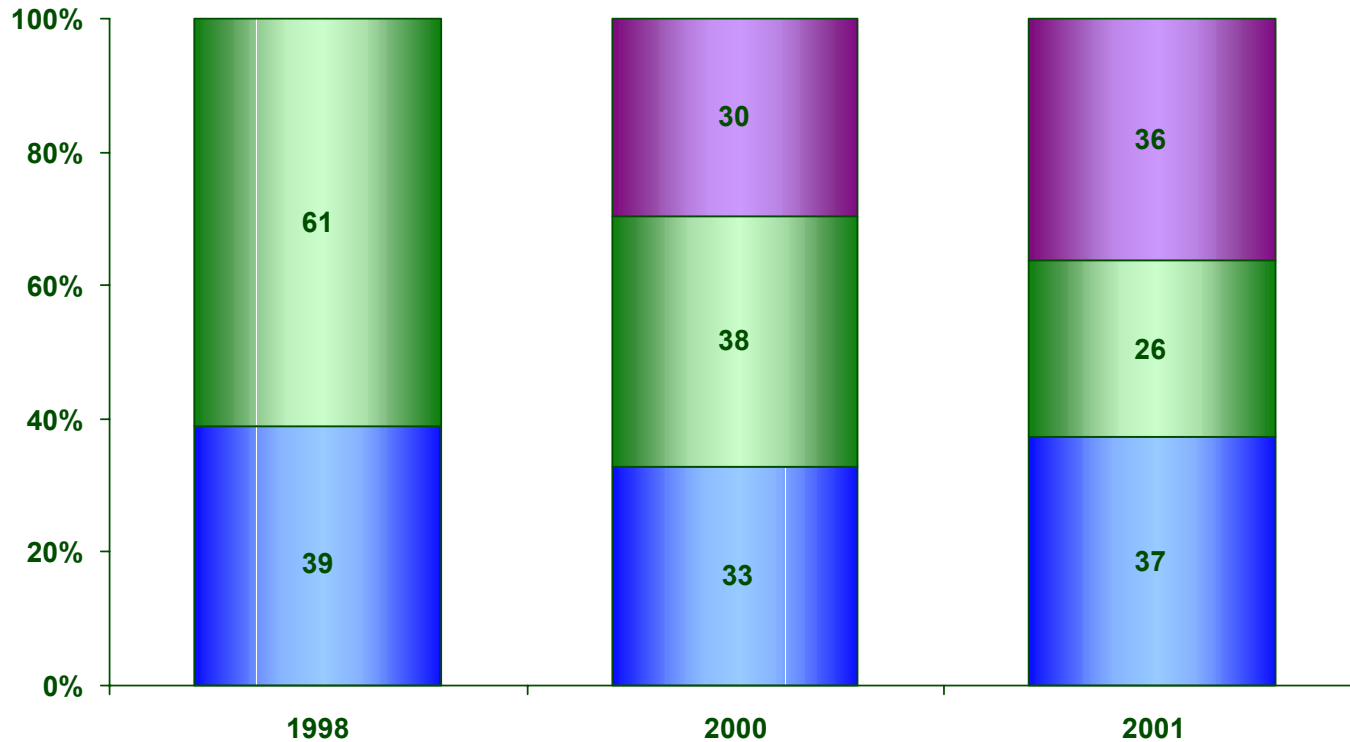
On Display (n):	7,152	3,966	8,383
NEW Label (n):	N/A	2,854	6,690
OLD Label (n):	6,792	877	1,176
NO Label (n):	360	225	517

Dish Washing Machine Compliance



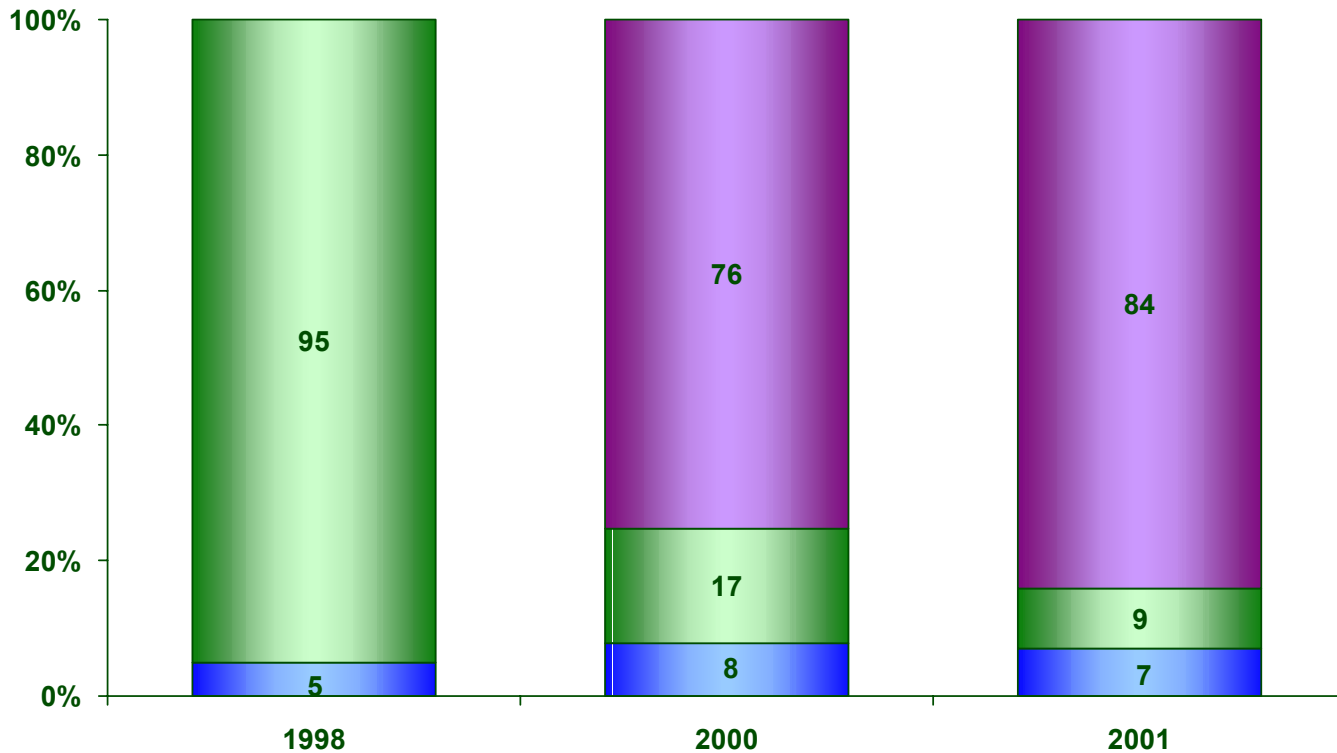
On Display (n):	3,645	1,735	3,875
NEW Label (n):	N/A	1,340	2,976
OLD Label (n):	3,270	254	457
NO Label (n):	375	141	442

Air Conditioner Compliance



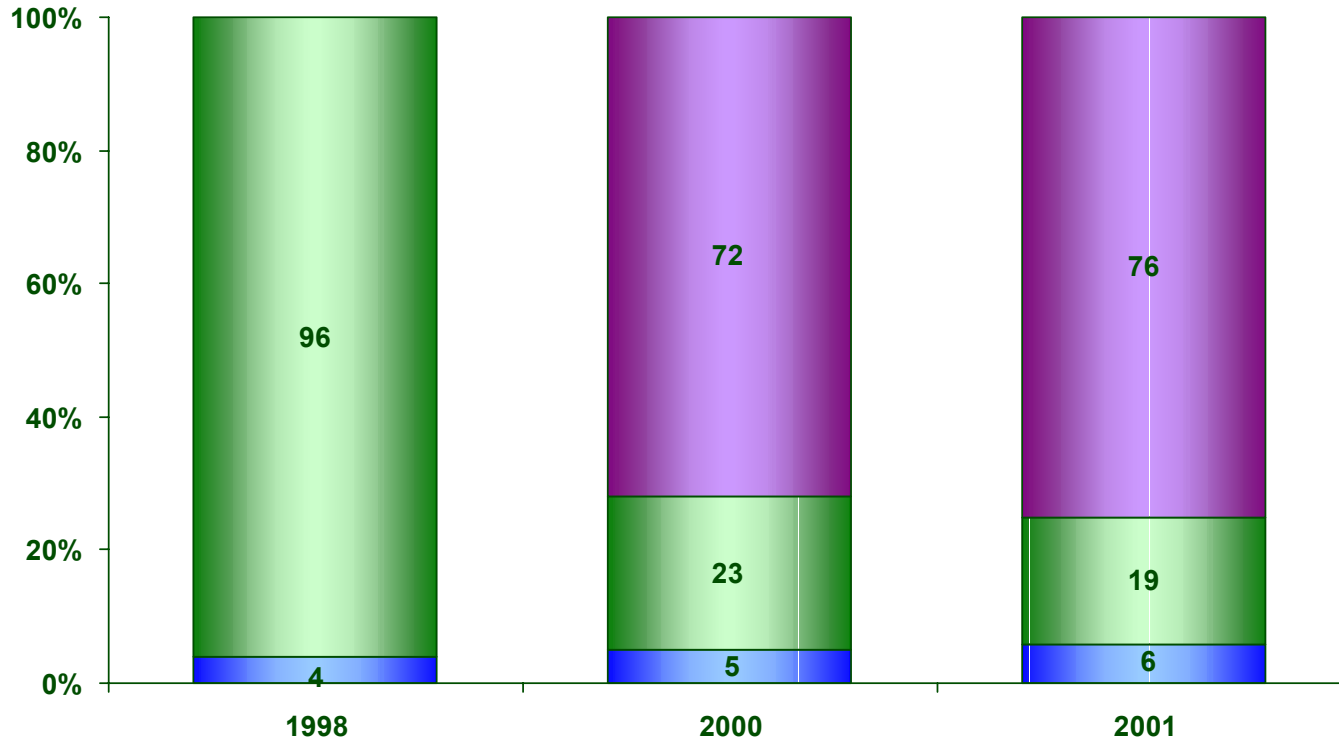
On Display (n):	1,695	1,289	2,108
NEW Label (n):	N/A	384	764
OLD Label (n):	1,030	483	555
NO Label (n):	665	422	789

Refrigerator / Freezer Compliance



On Display (n):	13,431	6,398	13,774
NEW Label (n):	N/A	4,834	11,534
OLD Label (n):	12,708	1,083	1,306
NO Label (n):	723	481	934

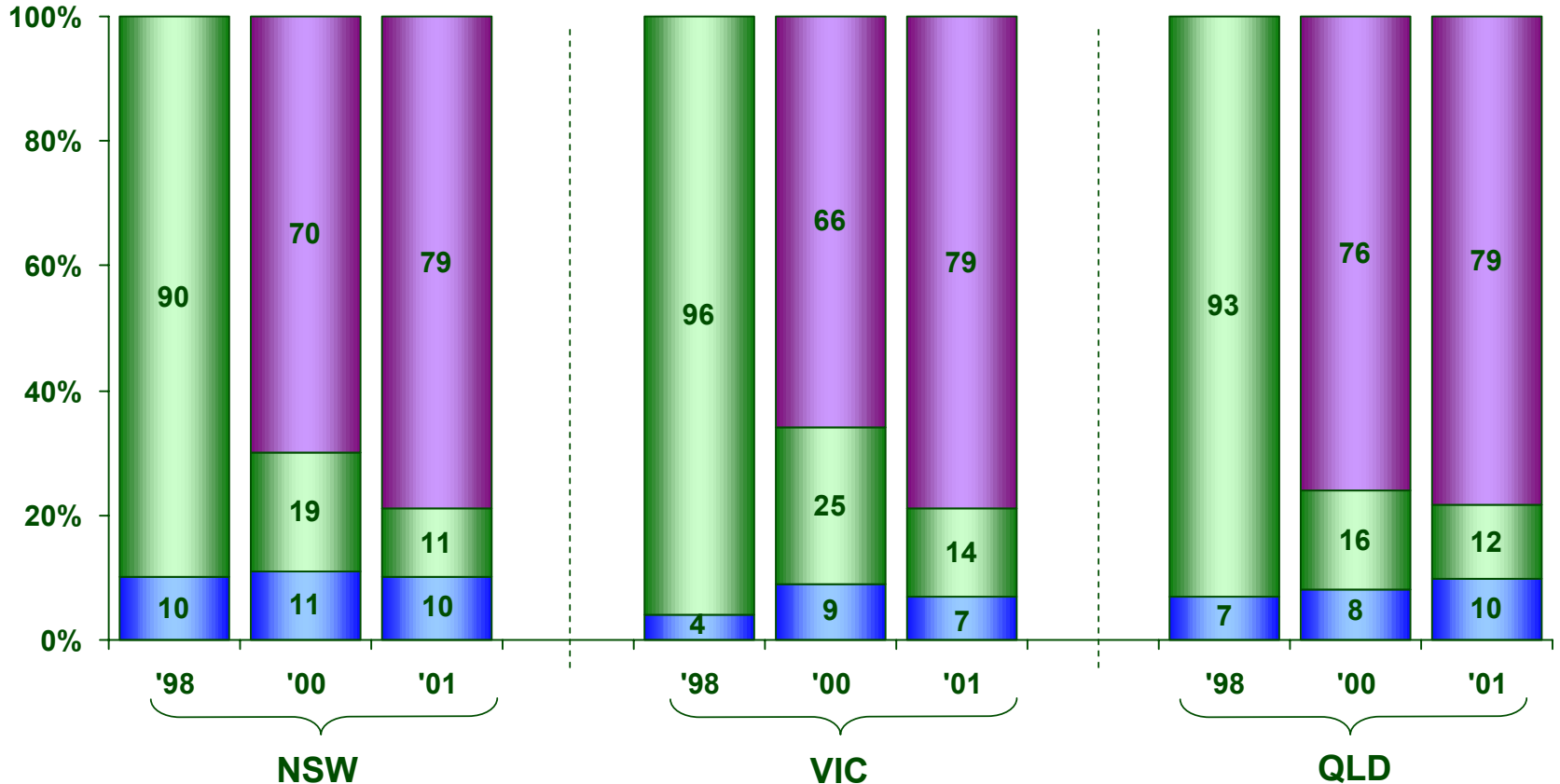
Clothes Dryer Compliance



On Display (n):	3,101	1,180	2,665
NEW Label (n):	N/A	846	2,013
OLD Label (n):	2,988	273	497
NO Label (n):	113	61	155

Compliance by State (1998, 2000, 2001)

■ NO Label
 ■ OLD Label
 ■ NEW Label



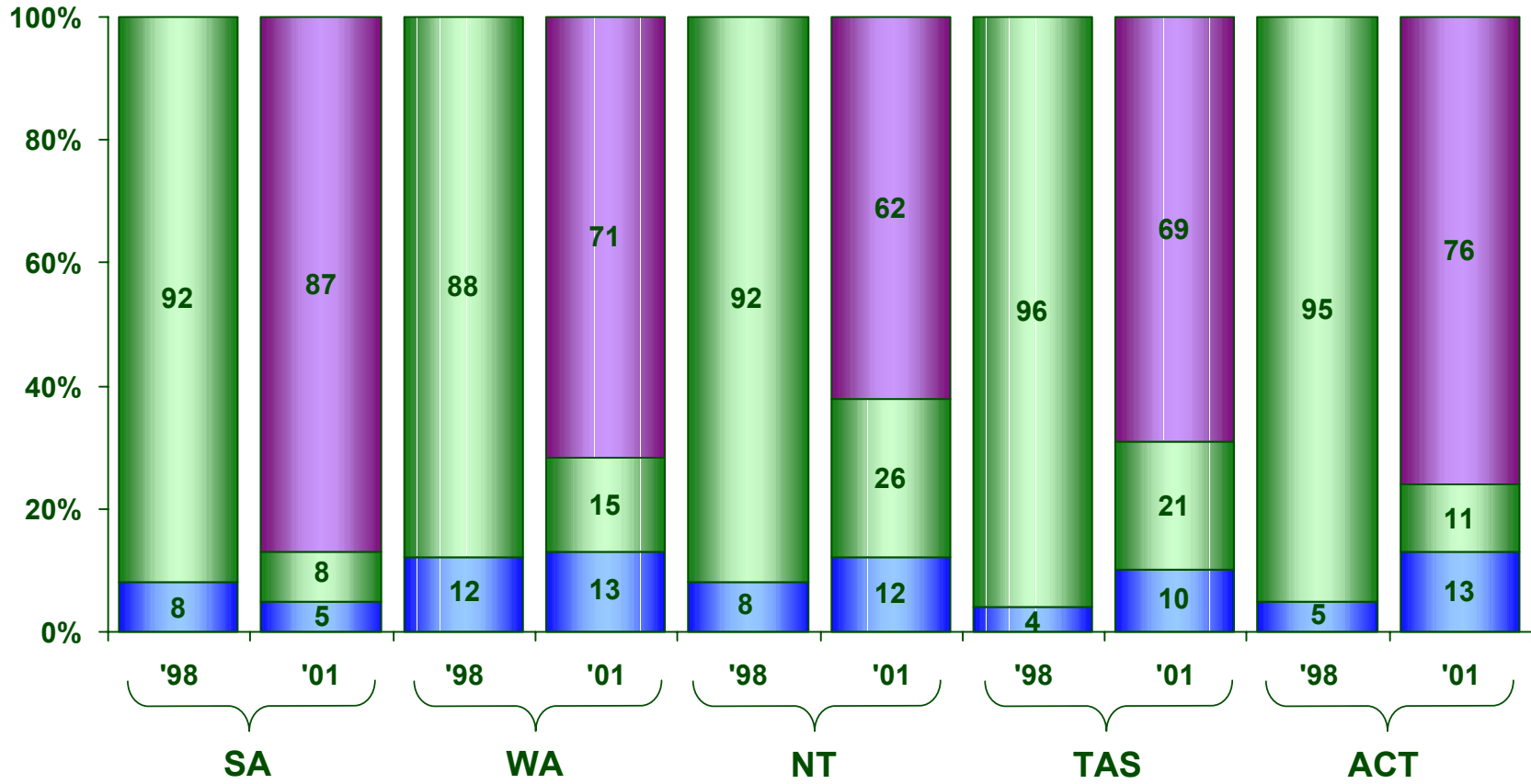
On Display (n)= 7,884 / 4,493 / 7,607

7,938 / 5,405 / 7,026

3,731 / 4,607 / 5,464

Compliance by State (1998 vs 2001)

■ NO Label ■ OLD Label ■ NEW Label



On Display (n)= 3,024 / 2,982

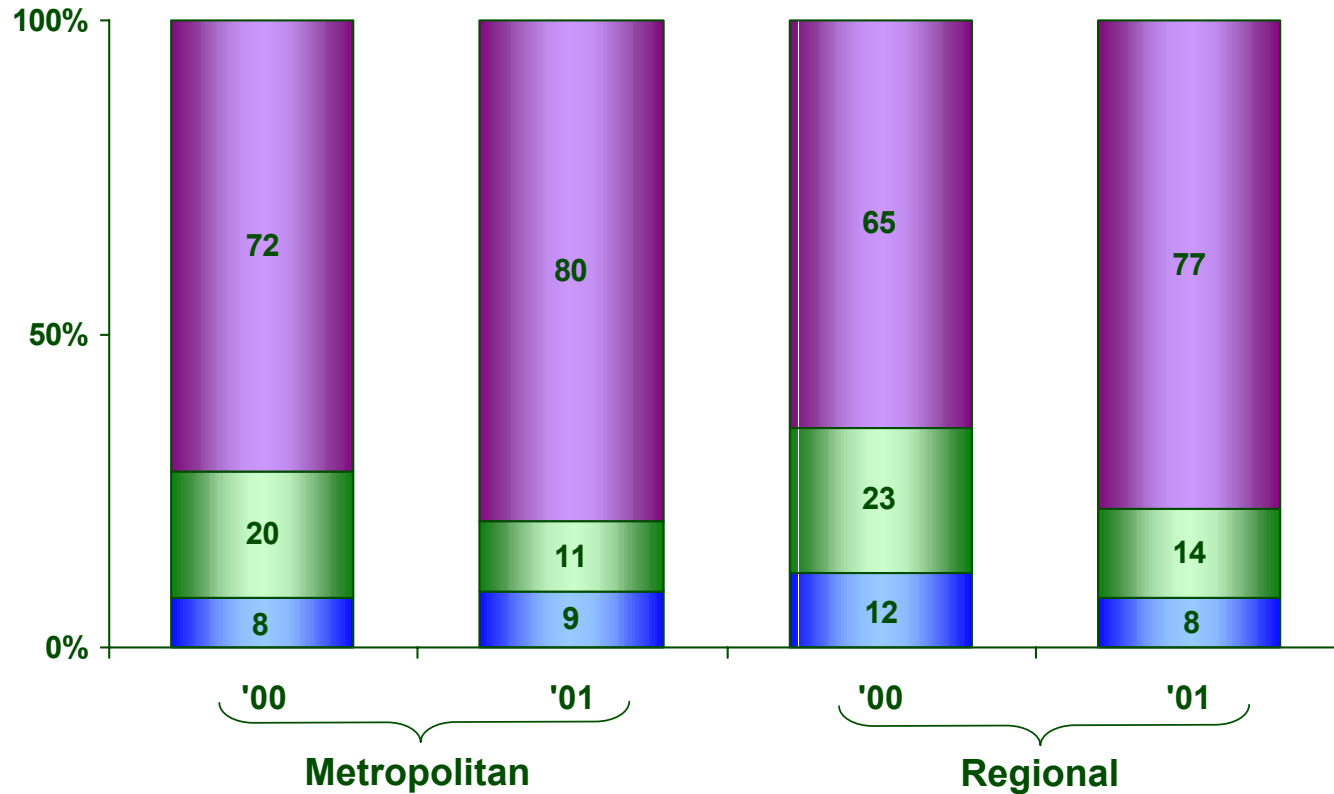
3,415 / 3,162

752 / 782

743 / 1,805

1,537 / 1,541

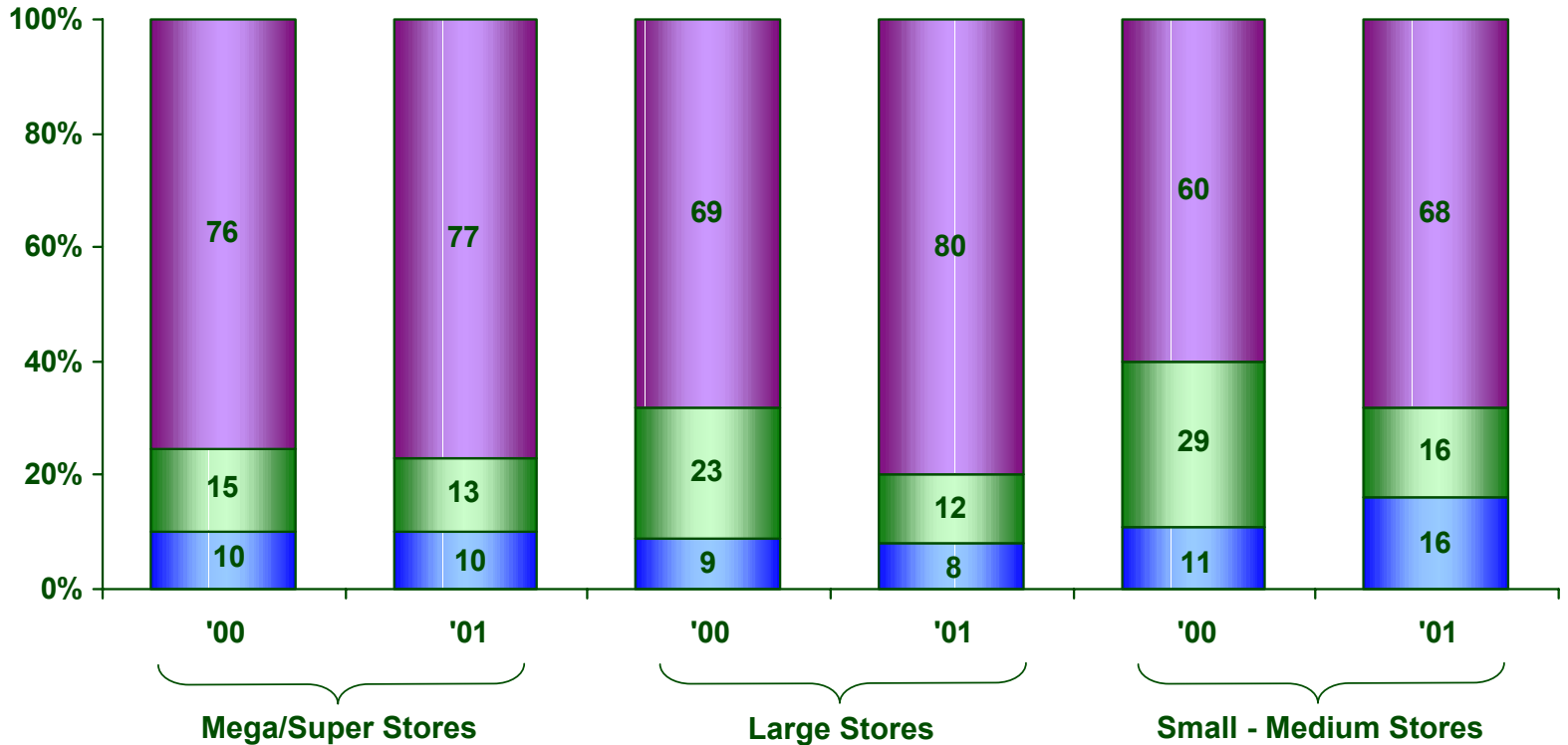
Metropolitan vs Regional Compliance (2000 vs 2001)



On Display (n):	11,607	12,931	2,961	7,368
NEW Label (n):	8,328	10,328	1,930	5,702
OLD Label (n):	2,306	1,422	674	1,050
NO Label (n):	973	1,181	357	616

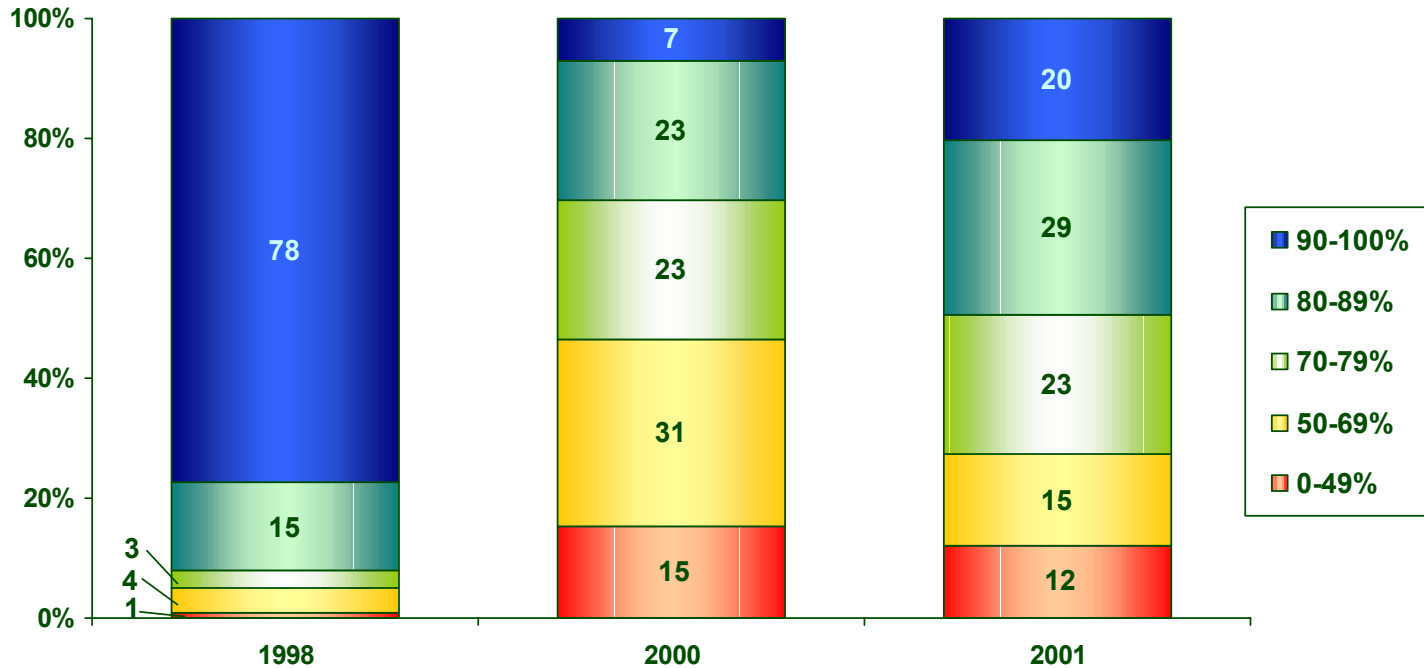


Compliance by Size of Retail Outlet (2000 vs 2001)



On Display (n):	4,879	6,902	8,720	20,627	969	3,276
NEW Label (n):	3,697	5,314	5,978	16,435	583	2,228
OLD Label (n):	712	899	1,988	2,571	280	521
NO Label (n):	470	689	754	1,621	106	527

Compliance Range by Retailer

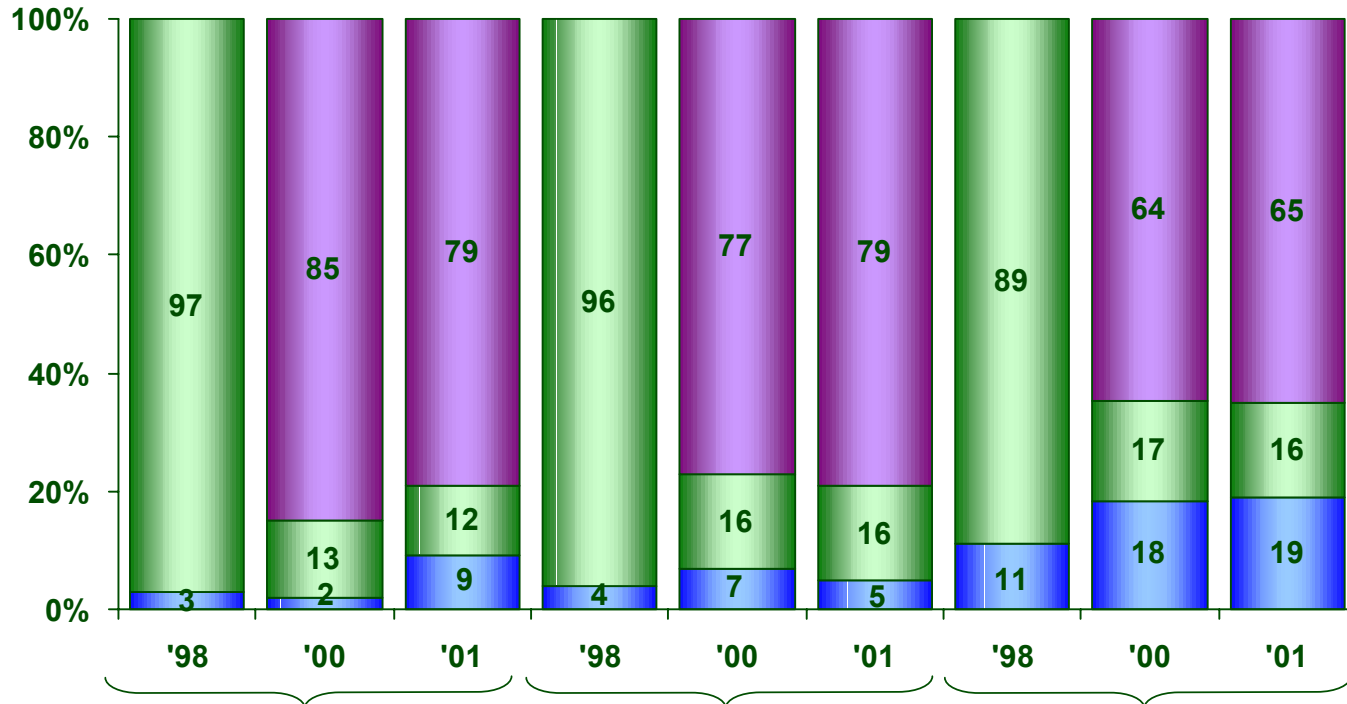


New Label Compliance Range	Number of Retailers 1998 (n)	Proportion of All Stores 1998 (%)	Number of Retailers 2000 (n)	Proportion of All Stores 2000 (%)	Number of Retailers 2001 (n)	Proportion of All Stores 2001 (%)
0 – 49%	5	1	23	15	49	12
50 – 69%	15	4	47	31	62	15
70 – 79%	10	3	35	23	92	23
80 – 89%	59	15	34	23	118	29
90 – 100%	311	78	11	7	80	20
Total	400	100	150	100	401	100

Note: May not total 100%, due to rounding.

Compliance by Brand (1998, 2000, 2001)

■ NO Label
 ■ OLD Label
 ■ NEW Label



Asko

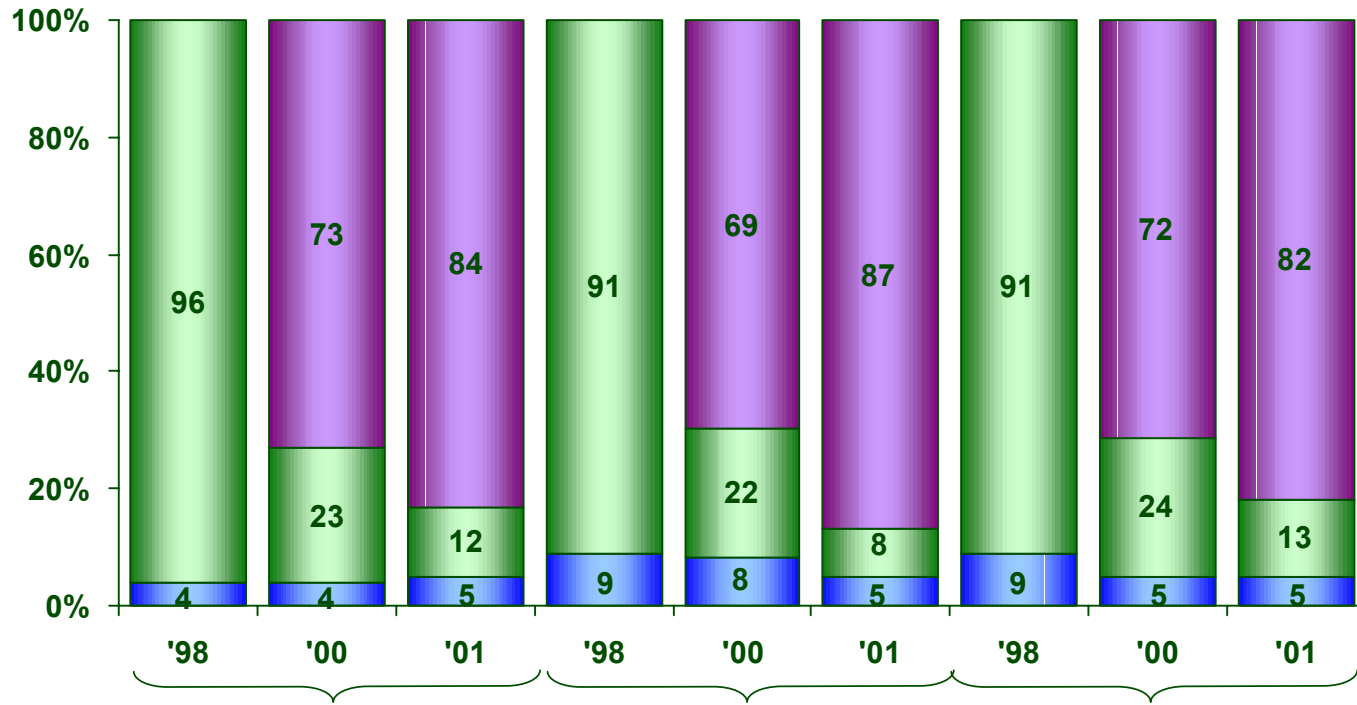
Fisher & Paykel

General Electric

On Display (n): 654 366 683 4,814 2,504 5,574 1,272 527 851

Compliance by Brand (1998, 2000, 2001)

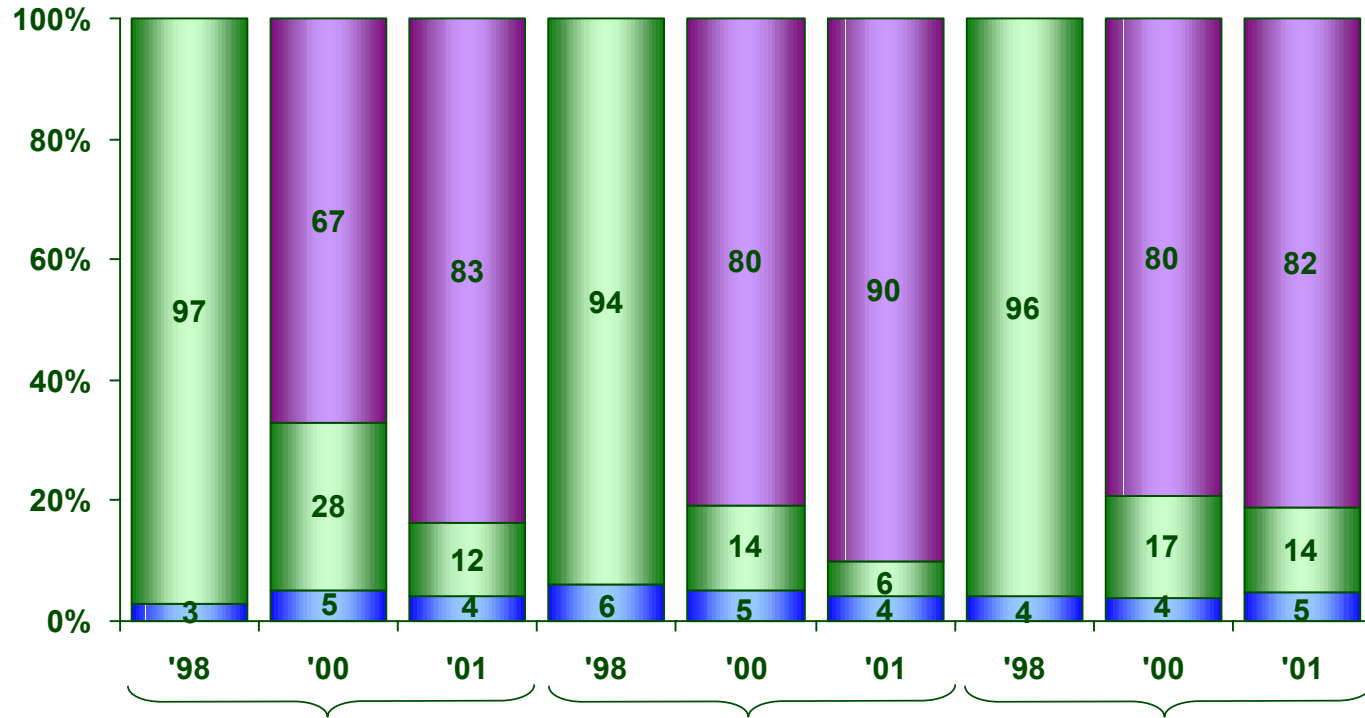
■ NO Label
 ■ OLD Label
 ■ NEW Label



On Display (n):
 Hoover: 3,289 ('98), 820 ('00), 1,878 ('01)
 Kelvinator: 2,520 ('98), 1,082 ('00), 2,460 ('01)
 LG: 338 ('98), 993 ('00), 1,955 ('01)

Compliance by Brand (1998, 2000, 2001)

NO Label OLD Label NEW Label



Simpson

Westinghouse

Whirlpool

On Display (n): 2,703 1,034 2,211 3,942 1,946 4,460 1,870 1,082 2,173