



Zoned Energy Rating Label – improving energy efficiency information

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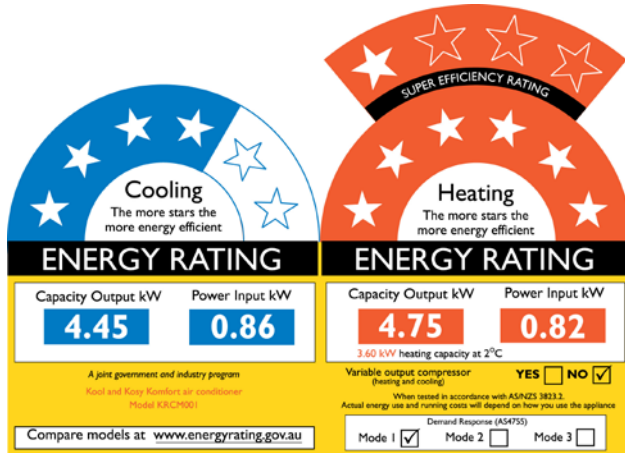
Department of Industry, Innovation & Science

Background

- The performance and energy efficiency of air conditioners can vary depending on where they are installed
- Current rating and testing methods do not reflect likely real-world performance
- Consumers (as well as retailers and installers) do not have enough information to make informed appliance choices



Current air conditioner ERL



- Testing and label data based on single temperature points
- Testing is with units at full capacity
- Appropriate sizing can be difficult for consumers (and some installers) to determine, particularly for colder climates
- Operating costs hard to determine



Zoned Energy Rating Label

- Displays efficiency and energy consumption across three distinct climate zones (Australia and New Zealand)
- Opportunity to display additional information valuable to consumers (and installers)
- Further online tools to give engaged consumers more detailed information (and for retailers to use as a selling point)



The ZERL

ENERGY RATING

When tested in accordance with government regulations

www.energyrating.gov.au

A joint government and industry program

COOLING

CAPACITY

All climates

4.50 kW

HEATING

CAPACITY

Hot/average climates

4.50 kW

Cold climates

2.50 kW

Omegon Inverter Supercomfort air conditioner
Model: DFMA008

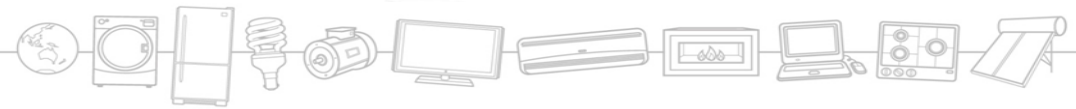
The more stars the more energy efficient

Energy consumption

HOT Brisbane, Darwin, Pacific Is	<div style="display: flex; align-items: center;"> </div>	1221	
	<div style="display: flex; align-items: center;"> </div>	72	kWh per year
AVERAGE Adelaide, Perth, Sydney	<div style="display: flex; align-items: center;"> </div>	606	
	<div style="display: flex; align-items: center;"> </div>	622	kWh per year
COLD Canberra, Hobart, Melbourne, New Zealand	<div style="display: flex; align-items: center;"> </div>	321	
	<div style="display: flex; align-items: center;"> </div>	1603	kWh per year

dB(A)

55
70



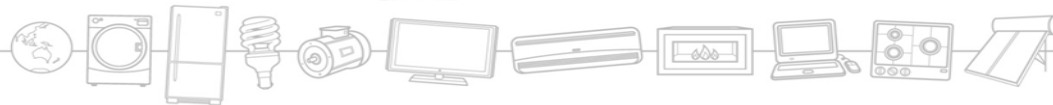
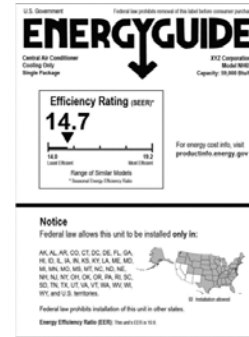
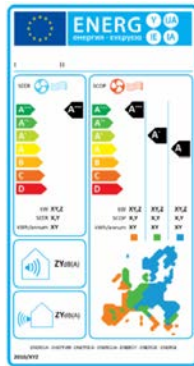
Benefits of a zoned label

- Energy efficiency gains without changes to models
- Incentivises manufacturers to supply products that are efficient in warmer and colder climates
- Provide opportunities for tailored information (to 87 HERS zones) to be accessed, such as more accurate running cost estimates
- Technology neutral – provides a level playing field (particularly important for future labelling of water heaters)



Zoned/seasonal labelling internationally

- EU SEER label for air conditioners mandatory since January 2013
- Labelling for all water and space heaters since September 2015
- USA introduced location-based MEPS & new label in January 2015
- US and Canadian Energy Star label for windows uses a map



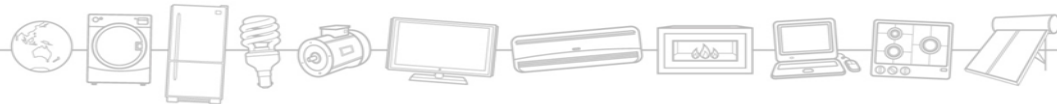
Development to date

- Work began on developing the ZERL in 2013
- Multiple rounds of graphic design, technical research & qualitative and quantitative testing
- Approx 4000 consumers and members of industry surveyed throughout process to ensure it will be useful and understood by the wide range of people likely to be using it
- E3 agreement to label design in October 2014



Comparative quantitative testing

- The zoned label performed as effectively, and in some cases, significantly *more* effectively than the existing label
- Consumer comprehension ranged from 50-80% in the online survey, with 70-80% finding the correct 'more efficient' product
- Results are of similar magnitude to results from EU label testing in 2012



Results – most efficient product

Heating

Cooling

73%



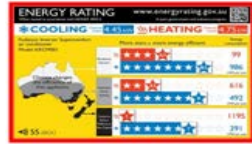
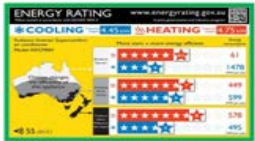
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69%



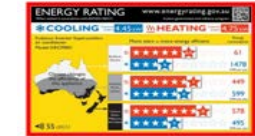
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74%



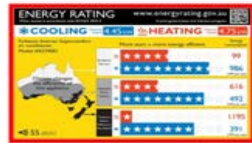
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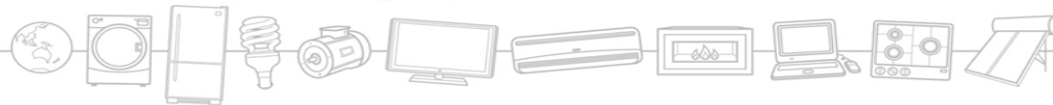


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23%



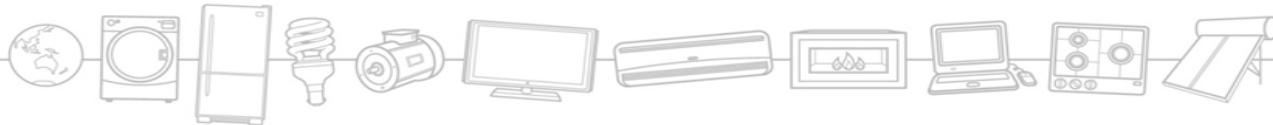
Results – identify number of stars

	Proportion stating correct star rating for their zone (heating)	Proportion stating correct star rating for their zone (cooling)
Current 	36%	49%
'Boxed' 	70%	71%
Non-'boxed' 	74%	77%



2015 testing

- Focus groups were held with consumers in Sydney, Brisbane, Melbourne, Perth and Auckland
- Interviews were also held with retailers and installers across these cities
- Quantitative testing of 2000+ consumers looked at individual label elements to help focus future education and training programs



Next stages

- Adoption of the zoned label is currently under consideration in the consultation Regulation Impact Statement for air conditioners and chillers
- Feedback on the RIS, including specific to the label, is welcomed
- Future adoption for all water heaters is also intended



Further information & RIS submissions

- www.energyrating.gov.au
- <https://consult.industry.gov.au/>
- Submissions close: **17:00 AEDT Friday
18 March**

