

COMMITTEE EL-015

DR 07276

(Project ID: 8606)

Draft for Public Comment Australian/New Zealand Standard

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BEGINNING DATE 8 June 2007
FOR COMMENT:

CLOSING DATE 10 August 2007
FOR COMMENT:

Amendment 3 to AS/NZS 3823.2:2005
Performance of electrical appliances—Airconditioners
and heat pumps
Part 2: Energy labelling and minimum energy
performance standard (MEPS) requirements

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The committee responsible for the issue of this draft comprised representatives of organizations interested in the subject matter of the proposed Standard. These organizations are listed on the inside back cover.

Comments are invited on the technical content, wording and general arrangement of the draft.

The preferred method for submission of comment is to download the MS Word comment form found at [http://www.standards.com.au/Catalogue/misc/Public Comment Form.doc](http://www.standards.com.au/Catalogue/misc/Public%20Comment%20Form.doc). This form also includes instructions and examples of comment submission.

When completing the comment form ensure that the number of this draft, your name and organization (if applicable) is recorded. Please place relevant clause numbers beside each comment.

Editorial matters (i.e. spelling, punctuation, grammar etc.) will be corrected before final publication.

The coordination of the requirements of this draft with those of any related Standards is of particular importance and you are invited to point out any areas where this may be necessary.

Please provide supporting reasons and suggested wording for each comment. Where you consider that specific content is too simplistic, too complex or too detailed please provide an alternative.

If the draft is acceptable without change, an acknowledgment to this effect would be appreciated.

When completed, this form should be returned to the Projects Manager, **Boris Krastev** via email to boris.krastev@standards.org.au.

Normally no acknowledgment of comment is sent. All comments received electronically by the due date will be put before the relevant drafting committee. Because Standards committees operate electronically we cannot guarantee that comments submitted in hard copy will be considered along with those submitted electronically. Where appropriate, changes will be incorporated before the Standard is formally approved.

If you know of other persons or organizations that may wish to comment on this draft Standard, could you please advise them of its availability. Further copies of the draft are available from the Customer Service Centre listed below and from our website at <http://www.standards.org.au/>.

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STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Committee EL-015—Quality and Performance of Household Electrical Appliances

Subcommittee EL-015-16 — Airconditioners and Heat Pumps

**Amendment No. 3
to
AS/NZS 3823.2:2005**

Australian/New Zealand Standard

Performance of electrical appliances—Airconditioners and heat pumps

**Part 2: Energy labelling and minimum energy performance standard (MEPS)
requirements**

Comment on the draft is invited from people and organizations concerned with this subject. It would be appreciated if those submitting comment would follow the guidelines given on the inside front cover.

This document is a draft Australian/New Zealand Standard only and is liable to alteration in the light of comment received. It is not to be regarded as an Australian/New Zealand Standard until finally issued as such by Standards Australia/Standards New Zealand.

STANDARDS AUSTRALIA/STANDARDS NEW ZEALAND

Amendment No. 3
to
AS/NZS 3823.2:2005
Performance of electrical appliances—Airconditioners and heat pumps
Part 2: Energy labelling and minimum energy performance standard (MEPS)
requirements

REVISED TEXT

The 2005 edition of AS/NZS 3823.2 is amended as follows; the amendment(s) should be inserted in the appropriate place(s).

SUMMARY: This Amendment applies to the Preface, Clauses 1.1, 1.2, 3.2, 3.4, 3.8, 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.6, Appendix B, Sections 2, 5, 6, 8, 9, 10, Appendix F and Table 3.1.

Published on .

Approved for publication in New Zealand on behalf of the Standards Council of New Zealand on

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No. 3

Preface

- 1 Last paragraph, Page 2, *delete* the first sentence.
- 2 *Delete* Item (f) on Page 3 and *replace* with the following:
‘(f) More stringent single-phase MEPS levels for some categories of products were introduced on 1 April 2006 while MEPS levels for remaining single phase products became more stringent on 1 October 2007.’
- 3 Page 3, after the third last paragraph beginning ‘Section 4 of this Standard...’, *add* the following:
‘Amendment No. 3 to this Standard deletes single phase MEPS requirements for all products in 2008 which were included in the 2005 revision of this Standard. These levels will be reviewed and new implementation date proposed following the release of new RIS due in later 2007. This will be confirmed once it has been approved by the Ministerial Council for Energy.
Amendment No. 3 introduces more stringent requirements for variable output airconditioners where these products do not meet MEPS at rated output. There are also additional reporting requirements for variable output products.
Amendment No. 3 requires a specific written approval from regulators where a supplier is seeking an exemption from energy labelling for commercial non-ducted single phase airconditioners. Amendment No. 3 also provides an updated indicative timing of the likely transition to a new energy label algorithm in 2009.’

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Clause 1.1

- 1 First paragraph, Line 2, *delete* the words ‘for household use’.
- 2 Third paragraph, *delete* the words ‘**Not applicable**’.

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No. 3**Clause 1.2**

Add new Item (h) as follows:

- ‘(h) Models may be granted exemption from the requirement to carry an energy label by the relevant Australian/New Zealand regulatory authority due to their specific design for commercial applications. In these cases, the supplier will be required to make an application for each model where an exemption is sought and provide documentation to satisfy regulators that an exemption from mandatory energy labelling is warranted because the product is—
- (i) designed for and used only in non-residential applications; and/or
 - (ii) the product would never be on display for sale through retail outlets; and/or
 - (iii) product is not promoted in any catalogue or advertising material that could be interpreted as suitable for some residential applications.’

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No. 3**Clause 3.2**

Add new Note after first paragraph, as follows:

NOTE: An analysis of the impacts of MEPS levels for single and three phase airconditioners is being conducted during 2007 and a cost benefit analysis is expected in 2007. This will propose a revised implementation date for the levels that were scheduled for October 2008 (deleted from this amendment) as well as revised MEPS levels for some other product types. Announcements of MEPS for close control and multi-split systems are expected in the near future.

AMDT
No. 3**Table 3.1**

Delete column 9 of the table titled ‘Min EER 1-Oct-2008’.

AMDT
No. 3**Clause 3.4**Delete the second paragraph and *replace* with the following:

‘Appliances with variable output compressors which do not meet the minimum energy performance standard requirements at rated capacity under CONDITION T1 in AS/NZS 3823.1.1 or AS/NZS 3823.1.2 or AS/NZS 3823.1.3, are deemed to comply with MEPS if they meet both of the following requirements:

- (a) The tested EER at rated capacity is not less than 95% of specified MEPS level.
- and*
- (b) The tested EER of a part load point selected by the supplier and documented with a test report supplied with the registration demonstrates that the model meets or exceeds either one of the following two requirements:
 - (i) For an output in the range 83.3% to 100% of rated capacity, the tested EER meets or exceeds the MEPS level.
- or*
- (ii) For an output in the range 50% to 83.3% of rated capacity, the tested EER must meet or exceed the following requirement:’

$$EER_{\text{tested}} \geq \left[1.25 - \frac{\text{Output}_{\text{part load}}}{\text{Output}_{\text{rate capacity}}} \times 0.3 \right] \times MEPS$$

AMDT
No. 3**Clause 3.8**

Add the following new paragraph after the Note:

‘While it will remain a requirement to supply to regulators any information on how to lock the speed of variable output systems during testing as part of the registration process, manufacturers should make such information readily available to facilitate third party testing. Wherever possible, manufacturers should design their products in a way that the capacity of variable output systems can be locked for testing purposes using controls on the product or using equipment normally supplied with the product (i.e., without the need for special test equipment supplied by the manufacturer).’

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No. 3**Clauses 4.1.2 to 4.1.6**

Delete Clauses 4.1.2 to 4.1.6 and *replace* with the following:

‘4.1.2 Registration

For an energy labelling and/or MEPS application in accordance with Appendix B, a test report to AS/NZS 3823.1.1 or AS/NZS 3823.1.2 or AS/NZS 3823.1.3 or a summary report in accordance with Appendix C shall be provided for the relevant test points. For a MEPS application in accordance with Appendix B, a test report to AS/NZS 3823.1.1 or AS/NZS 3823.1.2 or AS/NZS 3823.1.3, or a summary report in accordance with Appendix C shall be provided where physical tests have been conducted for the relevant test points. Where a simulation to AS/NZS 3823.3 has been conducted for a MEPS application in accordance with Appendix B, a report in accordance with Appendices A and B of AS/NZS 3823.3 shall be provided.

Where a supplier wishes to indicate the heating capacity on the energy label at 2°C in accordance with Section 5, this shall be indicated in the energy labelling application in Appendix B. To support the claimed heating capacity output and to verify the performance requirements in Clause 3.9, a test report to AS/NZS 3823.1.1 or AS/NZS 3823.1.2 or a summary report in accordance with Appendix C in accordance with these Standards shall be provided for Condition H2.

NOTES:

- 1 Applications in the form of computer printouts, which present all the application data in a similar layout to the forms in Appendix B, are equally valid.
- 2 Where HPRATE has been used for a simulation to support a MEPS application, a copy of the project (sys) file is regarded as equivalent to a report in accordance with Appendices A and B of AS/NZS 3823.3. Where values other than the defaults for pressure drop, subcooling or superheating are used in the project file (see Appendix A), test data to support the use of these values will be required. Simulations for heating may not be valid where defrosting could occur.

For registration, the relevant state regulatory authority shall be contacted.

NOTE: Details of the relevant regulatory bodies are available from www.energyrating.gov.au website.

4.1.3 Test report

A test report in accordance with AS/NZS 3823.1.1, AS/NZS 3823.1.2, AS/NZS 3823.1.3 or AS/NZS 3823.3, as applicable, for each model tested shall be held by the appliance supplier if not supplied with the original registration.

The documents required by this Section shall be made available to the relevant regulatory authority upon request. Records shall be retained for at least five years after the last date of manufacture or import, whichever is applicable.

4.1.4 MEPS transition

All products within the scope of MEPS manufactured or imported for sale in Australia on or after the relevant MEPS date shall meet the relevant MEPS requirements. Such units shall hold a valid registration at the time of sale, which shall indicate compliance with these MEPS requirements.

Variable output products which have used part load provisions of Clause 3.4 up to and including Amendment No. 1 of this Standard to claim MEPS compliance will expire on 31 March 2009. Only registrations to Amendment No. 3 of this Standard will be permitted from 1 July 2008.

NOTE: More details on the duration and validity of registrations can be found in the Administrative Guidelines. The most up to date version can be obtained from the www.energyrating.gov.au website.

4.1.5 Energy label transitions

Regulators have advised that products with existing registrations for energy labelling to a previous edition of this Standard can continue to affix and display these previously approved labels until the product requires re-registration for MEPS or energy labelling as defined in this Standard.

Products with energy labels to previous editions of this Standard, which are manufactured or imported prior to the relevant regulatory date may be supplied directly from a warehouse without the need to re-label for an indefinite period.

NOTE: Energy labelling algorithms are due to change in 2009 (refer Appendix F) as defined in a future edition of this Standard. Special provisions will apply to products on display in retailers during the 2009 energy transition. Details will be contained in a forthcoming revision of this Standard.

4.1.6 Duration of registration

Registrations for energy labelling and MEPS may have a validity of up to 5 years. Registration expiry dates are reviewed annually and records may be extended (up to the 5 year limit in 1 year increments) where there is no forthcoming change to regulatory requirements.

NOTE: More details on the duration of registration can be found in the Administrative Guidelines. The most up to date version can be obtained from the www.energyrating.gov.au website.

Appendix B, Paragraph B4, Section 2

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Add a new row after 'Is this product to be used exclusively for.....' and insert text as follows:

<p>For commercial single phase non-ducted units, are you seeking an exemption from energy labelling for this product?</p> <p>(An exemption requires a separate submission to regulators (refer Clause 1.2(h)).</p>	<p>Yes/No</p>
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Appendix B, Paragraph B4, Section 5

1 Delete text from the last row and *replace* with the following:

Does this airconditioner have a variable output compressor?	Yes/No
If yes, state type: Inverter	Yes/No
Other variable output	State type

2 Add new text to the end of Section 5 as follows:

If inverter driven, state the maximum continuous frequency for cooling (Hz):	
If inverter driven, state the maximum continuous frequency for heating (Hz):	

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Appendix B, Paragraph B4, Section 6

1 Add new row in 'TEST RESULTS—COOLING—CONDITION T1' after 'Indicate fan and any other settings for determination of rated capacity:' and *insert* text as follows:

If inverter driven, state the frequency of the inverter at rated capacity for cooling (Hz)	
--	--

2 Add new row in 'TEST RESULTS—HEATING—CONDITION H1' after 'For ducted systems, indicate air flow rate (cubic metres/second):' and *insert* text as follows:

If inverter driven, state the frequency of the inverter at rated capacity for heating (Hz)	
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Appendix B, Paragraph B4, Section 8

1 After 'EER' *add* a new row and *insert* the following text:

If inverter driven, state the frequency at this output	
--	--

2 After 'COP' *add* a new row and *insert* the following text:

If inverter driven, state the frequency at this output	
--	--

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Appendix B, Paragraph B4, Section 9

Rows 4, 6, 7 and 8, *delete* text and *replace* with the following:

The rest of this Section shall be completed if the measured EER is ≥ 0.95 MEPS but less than MEPS at rated capacity. A test report shall be supplied at the % of rated capacity used to claim compliance with MEPS.	
Cooling capacity used to verify MEPS compliance (kW): (Output as % of rated capacity)	
Tested or modelled EER (W/W): (At % of rated capacity stated above)	
If inverter driven, state the frequency of the inverter at this load (Hz):	
Where applicable, indicate method of obtaining fixed output on airconditioners with variable output capacity The EER at rated capacity and at the part load point above meet the MEPS requirements specified in Clause 3.4:	Yes/No

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Appendix B, Paragraph B4, Section 10

1 *Delete* text for row 9 'Applicable 2008 MEPS level...' and *replace* with the following:

For variable output products that do not meet MEPS at rated output, does this model comply with the requirement of Clause 3.4 (refer Section 9):	Yes/No
--	--------

2 *Add* a new row at the end of the 'Three-phase unit MEPS levels....' table and *insert* the following:

For variable output products that do not meet MEPS at rated output, does this model comply with the requirement of Clause 3.4 (refer Section 9):	Yes/No
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Appendix F

Delete paragraphs 1, 2 and the last one and *replace* as follows:

‘The following energy labelling algorithms will replace the star rating equations in Clause 2.5. These will be available for display on product in late 2008 and will apply to all products registered from April 2009. A transition period for the new label for product on display will apply until late 2009.’

‘SRI cooling—2009

SRI heating—2009’

‘These equations have been revised for adoption with the more stringent MEPS levels come into force in 2007. These equations and associated changes to the energy label will be included in a revision of this Standard in 2007/2008. If you have any comments on these algorithms, contact the Australian Greenhouse Office on energy.rating@environment.gov.au’

*** END OF DRAFT ***

PREPARATION OF JOINT AUSTRALIAN/NEW ZEALAND STANDARDS

Joint Australian/New Zealand Standards are prepared by a consensus process involving representatives nominated by organizations in both countries drawn from all major interests associated with the subject. Australian/New Zealand Standards may be derived from existing industry Standards, from established international Standards and practices or may be developed within a Standards Australia, Standards New Zealand or joint technical committee.

During the development process, Australian/New Zealand Standards are made available in draft form at all sales offices and through affiliated overseas bodies in order that all interests concerned with the application of a proposed Standard are given the opportunity to submit views on the requirements to be included.

The following interests are represented on the committee responsible for this draft Australian/ New Zealand Standard:

Australian Electrical and Electronic Manufacturers Association
Australian Retailers Association
Business New Zealand
CHOICE
Consumer Electronic Suppliers Association
Department of Employment and Industrial Relations (Qld)
Department of Water and Energy (NSW)
Electrical Compliance Testing Association
Energy Efficiency and Conservation Authority of New Zealand
Energy Safe Victoria
Institution of Professional Engineers New Zealand
National Appliance and Equipment Energy Efficiency Committee
National Association of Testing Authorities Australia
Office of the Technical Regulator (SA)

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Standards Australia is an independent company, limited by guarantee, which prepares and publishes most of the voluntary technical and commercial standards used in Australia. These standards are developed through an open process of consultation and consensus, in which all interested parties are invited to participate. Through a Memorandum of Understanding with the Commonwealth government, Standards Australia is recognized as Australia's peak national standards body.

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The first national Standards organization was created in New Zealand in 1932. The Standards Council of New Zealand is the national authority responsible for the production of Standards. Standards New Zealand is the trading arm of the Standards Council established under the Standards Act 1988.

Australian/New Zealand Standards

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Standards Australia and Standards New Zealand are responsible for ensuring that the Australian and New Zealand viewpoints are considered in the formulation of international Standards and that the latest international experience is incorporated in national and Joint Standards. This role is vital in assisting local industry to compete in international markets. Both organizations are the national members of ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission).

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