ECOFYS

sustainable energy for everyone

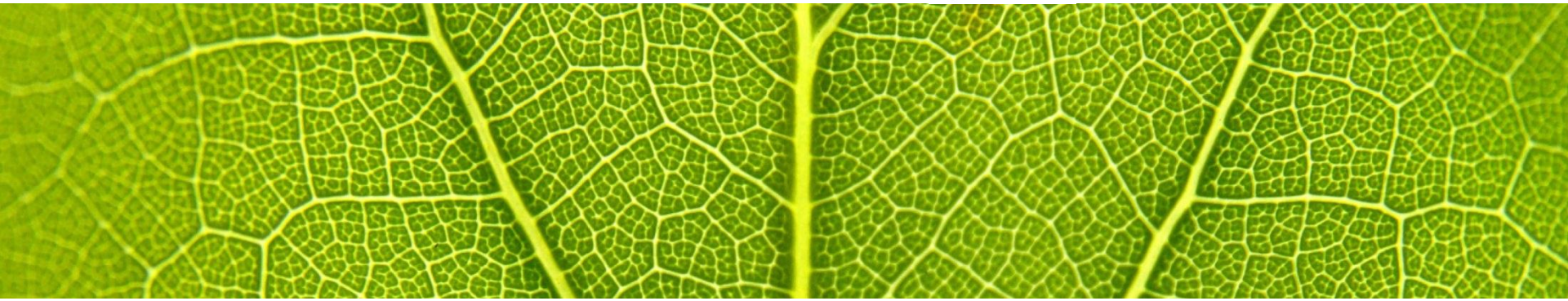
Waide Strategic Efficiency

Öko-Institut e.V.
Institut für angewandte Ökologie
Institute for Applied Ecology

ISR - University of Coimbra

SO WATT
Sophie Attali

SEVEn
STŘEDISKO PRO EFEKTIVNÍ VYUŽÍVÁNÍ ENERGIE, o.p.s.
THE ENERGY EFFICIENCY CENTER



Findings in the Energy Labelling Directive's Evaluation Study on the issues to consider when updating existing labels

1. Core principles – What should the label scale do?

> To be an effective market transformation tool the energy label needs to work for consumers and motivate a response among industry and the supply chain

> For consumers the label scale needs to be:

- comprehensible
- salient
- motivating
- memorable

> For producers it needs to provide a level playing field, set attainable goals and stimulate sales sufficient to justify the investment in attaining prescribed performance thresholds

> The design of the label scale is one of the key aspects that governs the overall market transformational effect of the energy label and hence it is appropriate to review fundamental considerations that will need to be borne in mind when contemplating any revision to the existing design

2. Design principles – The value of the triple mnemonic

> Labelling research has found over the years that labels that use mnemonics work much better than those that don't

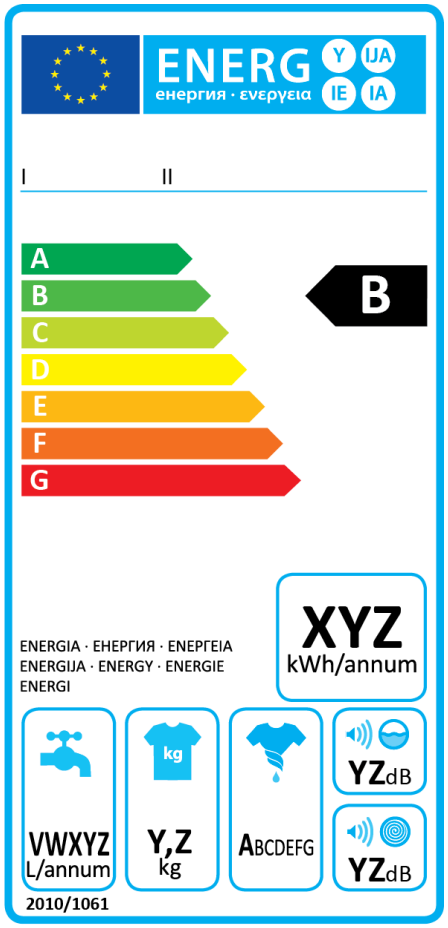
> Mnemonics are devices that aim to translate information into a form that the human brain can retain better than its original form and aid information retention

> In addition, good mnemonics in the context of an energy label provide an easy means of determining ranking

> The EU label has three mnemonics embedded in it:

- the A to G (or A+++ to D) letter scale
- the seven stacked-arrows from short to long
- the colour code from Green to Red

> Each of these aids consumers with ranking and recall and each complements and reinforces the message of the others



3. Brand recognition and continuity of design

- The EU energy label is very well known among European consumers and is like a high profile brand
- This brand has been built up over many years and has considerable recognition value in its current form
- Therefore, it is important that any design changes should be evolutional rather than a completely new concept so the brand recognition is clearly maintained and so the existing consumer knowledge of the label is built upon

4. Revising the label scale – why is it needed?

> The key challenge is how best to modify the label scale stimulate continuing market transformation whenever there has been a concentration of products into the higher efficiency classes e.g. for product groups that have been subject to labelling for a number of years

> It is appropriate to revise the label so that the spread in product efficiency among label classes is increased and so the highest efficiency products are clearly differentiated from the rest on the efficiency scale whenever there is:

- a concentration of models in the top classes
- new products become available that have a significantly higher efficiency than the current top efficiency threshold

> Historically the EU has addressed this by adding new classes above the A class (the A+, A++ and A+++ classes), however, findings from the stakeholder consultation show there is broad-based agreement that it is not desirable to go beyond the current A+++ class by continuing to add more plusses

5. Revision of the label scale – when is it needed?

Maintenance of on-going market transformation requires that:

- the top efficiency class should always be possible to attain
- the top efficiency class is always challenging to attain;

Therefore, consider recasting the efficiency scale whenever:

> the top efficiency class is populated by more than a certain percentage of the models on the market (*note, implementation would require on-going market monitoring*)

> products are marketed that have an efficiency that is at least one label class step higher than the current top class threshold

> a techno-economic energy engineering analysis demonstrates that a viable technology exists that is at least one label class step higher than the current top class threshold

Satisfaction of any of these conditions could trigger a label scale revision process

6. Findings from consumer research – the current label

- The **mnemonics** currently used on the label are highly effective. The letters on the energy efficiency scale, the colour coding and the stacked arrows are all clearly understood, reinforce each other and are motivating to consumers
- Furthermore, they each have clear top and bottom end points which aids users to determine where a product is positioned among the spectrum of products (providing the whole scale is active). The extra plus signs are an exception to this.
- Retention of these elements would also aid continuity in brand recognition, which is strong and should not be lightly surrendered
- This strongly implies that these elements within the design of the label scale should only be discarded if an alternative set of mnemonics is found via consumer testing to be clearly superior

7. Original revised design concepts – from tender document

- Previous research has shown the **mnemonics** currently used on the label are highly effective. The letters on the energy efficiency scale, the colour coding and the stacked arrows are all clearly understood, reinforce each other and are motivating to consumers
- The closed scale, open scale and numerical options maintain these for colour and stacked arrows but the numerical option loses the name of the class and substitutes it by a number that could vary among any integer within a wide scale
- For whatever revision solution considered a product will not retain the same values for all these mnemonics following a label scale revision – e.g. an orange classed product would cease to have the same colour following a revision (even if more classes are added), the length of the product's stacked arrow would change, etc.

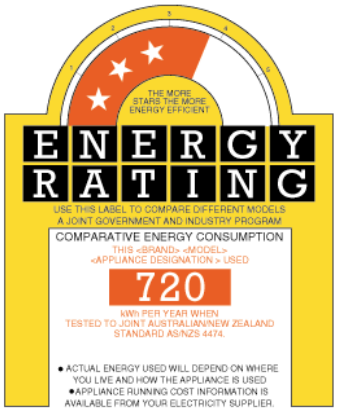
Closed

Open-ended

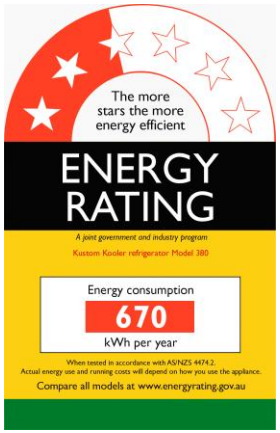
Numerical

8. Australia has rebased their categorical label (courtesy of Lloyd Harrington)

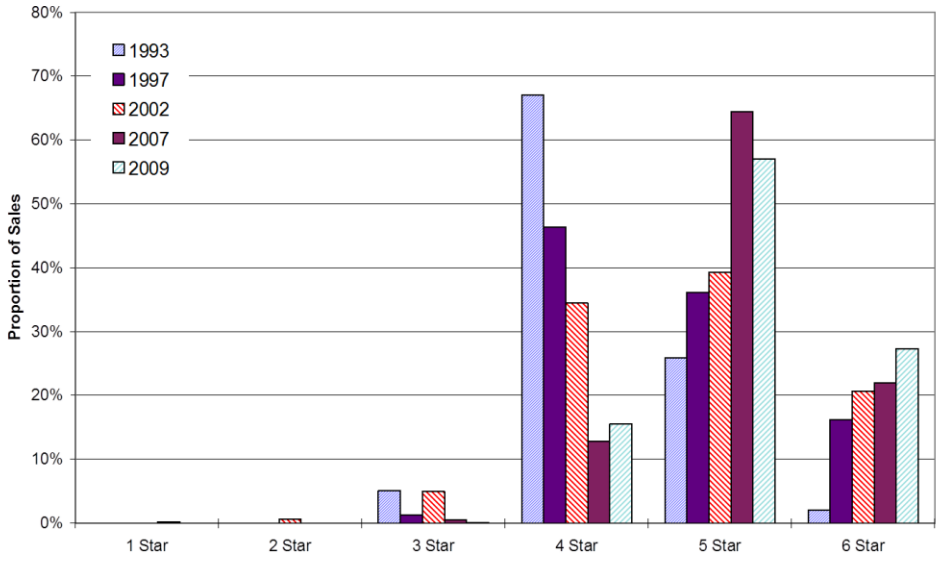
1986 version



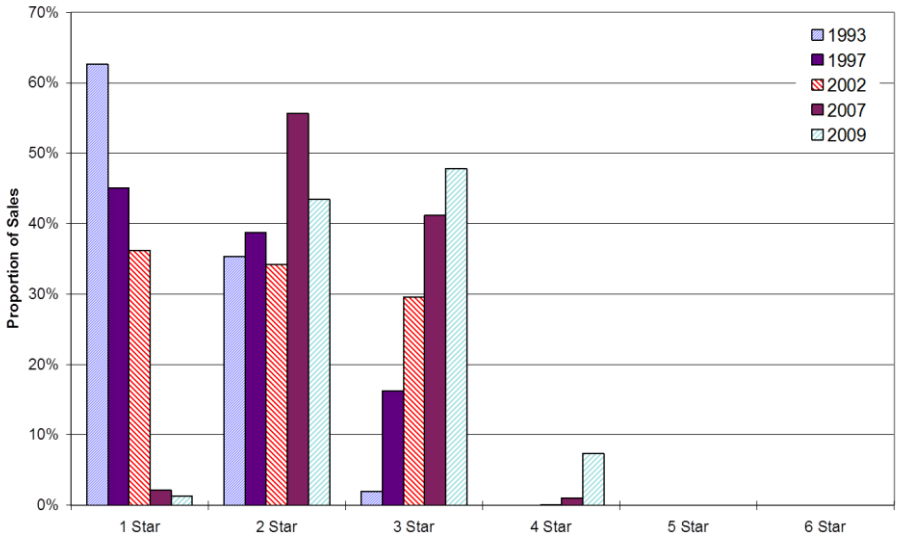
Post 2000 version



Pre 2000 scale dishwasher sales by star rating



Post 2000 dishwasher scale sales by star rating



9. Findings concerning transition issues from the Australian label re-grading experience (courtesy of Lloyd Harrington)

> Transition issues:

- Monitor consumer use of the label – little evidence of consumer confusion between old and new labels was found
- Old labels in stores: This was a major concern in the planning phase. The majority of products had new labels displayed at the end of the transition
- Consumers receiving products with different star ratings was a concern prior to the transition i.e. that labels in the shop could be different to warehouse stock supplied. Transition label used by some suppliers to overcome this
- Stock turnover: most suppliers carry little stock, so turnover is fast. So the issue is not flushing out old labels from the warehouse stock
- Biggest issue is getting retailers to change display stock on the shop floor

10. Australia – re-grading experience conclusions (courtesy of Lloyd Harrington)

> Keep the label simple
> Re-grading labels requires significant effort and planning
> It is a significant imposition on suppliers
> But re-grading is necessary from time to time to:
- keep the label grades relevant
- reduce bunching
- enhance market pull

> and is worth the effort

11. Thresholds – The backbone of the label

- Setting thresholds within a closed scale is a successful fundamental of the current EU energy label, and aids relative performance comparison
- Correctly set thresholds create competition between manufacturers/products to reach higher energy efficiency classes
- Products are usually designed to just meet the various thresholds
- The use of mnemonics facilitates comprehension and retention of product efficiency information yet the mnemonics are delineated by efficiency thresholds that determine where each class falls on the efficiency scale
- Mnemonics can only work if there is a menu of thresholds to delineate them – thus any change towards a continuous scale design without thresholds would lose the benefits of mnemonics
- Therefore it is necessary that delineated performance thresholds be maintained if mnemonics are to be implementable and if product designers are to have clear performance targets to aim for

12. Overall conclusions

- There is no viable future label scale design that does not imply some level of rebasing (i.e. reclassification) of existing products e.g. the grade of at least one and usually several of the mnemonics has to change for existing products with all alternative designs
- Even were more plus signs to be added, the colour code and arrow length would have to change thus a yellow ranked product would no longer be in the yellow class once the new classes were added, etc.
- The decision on what the future rebased design should look like ought to be determined by an assessment of which design has the strongest market transformational effect i.e. which is most comprehensible, salient, motivating and memorable for consumers
- This has to be determined by consumer research