

Revising EU energy label: evolution or revolution?

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Abstract

2014–2015 is the time horizon for revising the European Energy Labelling Directive, in a coordinated way with the Ecodesign Directive. This coupled revision is a unique opportunity to combine in a more consistent way *push and pull* instruments for energy efficient product policy.

The last revision of the Energy Labelling Directive finalised in 2010 had been a somehow *traumatic* political exercise, resulting in a last minute decision to introduce additional classes above the former highest A class, namely A+, A++ and A+++ for all product categories (A+ and A++ for refrigerating appliances had appeared on the market in 2003). This solution to address the obsolescence of existing labels led to criticism by consumer and green NGOs, while at the same time not satisfying the industry, particularly as the deal failed to deliver a long term strategic solution for a dynamic scheme. How could the legal revision to start in 2014–2015 better unleash the potentials of the Energy Label, with regards to its two key objectives: continuously driving consumers towards the best appliances and stimulating innovation and differentiation? The challenge is to identify how to ensure continuity with the strengths of the initial scheme while correcting the factors that may lead to poor dynamism and eventually decrease the impact of energy labelling on purchasing decisions. Eager to look at the file from a fresh angle and avoid past tensions, stakeholders from NGOs and industry have tried to put together some ideas to look at the issue from a fresh angle. They agreed about a set of principles to orient future investigations and suggested a

few, non-exhaustive labelling layout elements they would like to see tested in the European Commission preparatory works supporting the revision of the framework Directive. This paper presents the guiding principles and three possibilities for the EU Energy Label evolution.

- A 'towards zero' scale, enabling a stable scaling pattern;
- the indication of a dated benchmark, allowing the immediate comparison to best performers available on the market;
- and the use of a continuous numeric approach versus – or in addition to – a mere class based layout.

These ideas represent a contribution to the work in progress. If and how they could be adopted as constituents of the new label should be assessed by proper field testing.

Context

TOWARDS A REVISION OF THE EU ENERGY LABELLING BY 2014–2015

The European Energy Labelling Directive (2010/30/EU of 19 May 2010) is to be reviewed no later than 31 December 2014 (according to its article 14), potentially leading to a revision. The European Commission has confirmed the idea to synchronise it with the revision of the Ecodesign Directive (2009/125/EC). These two Directives set overall objectives and general rules, while their concrete implementation is taking place through the additional definition of Implementing Measures for specific product categories. The two pieces of legislation are complementary and often presented as the combination of push (Ecodesign) and pull (Energy Labelling) instruments. Ecodesign aims at progressively removing the

worst performers from the market, while the Energy Label drives the market towards best performers. They are *single market* policies, as the Implementing Measures apply to the whole EU market.

Currently the decision-making process is not based on the same legal procedure, due to the change of EU Treaty in 2009. The Ecodesign Directive still falls under the old comitology procedure (Implementing Measures are voted by a committee of Member State officials before these can be adopted), while the Energy Labelling implementation is using the new *Delegated Acts* regime defined by the Lisbon Treaty (no vote by Member States required, the decisions taken by the Commission are subjected to a 2 to 4 month right of scrutiny by the European Council and Parliament) [1].

The coordinated revision in 2014–2015 is not only the opportunity to perfectly align the legal basis, but also and above all, a way to increase consistency amongst these policies in order to ensure they will deliver their full coordinated potentials for energy and financial savings in a more dynamic manner.

Grasping these saving potentials requires that the labelling scheme continuously triggers adequate purchasing decisions and competition towards best performing products. An essential question is to know if this fundamental goal can be satisfactorily achieved in the long term with the scheme as revised in 2010, introducing classes with *plusses* on top of A class, and if not what could alternative solutions look like.

This paper builds on the experience of its authors, who have been stakeholder representatives in this EU policy process for years and have actively participated in many discussions and fora related to the Energy Labelling scheme. The paper is centred on the European situation. It starts from the historical perspective of the EU energy label, and elaborates in this context potential recommendations and fresh ideas for the policy debate.

Lessons can also be learned from other jurisdictions. International compilations and guidelines are regularly published (for example by the organisation CLASP [2]), which are not presented here. Several types of energy labelling schemes exist in the world (endorsement, categorical, non-categorical, etc.). Their differences can be explained by historical and national specificities. Updating and revision processes of energy labels have already taken place in some countries. It is interesting to note that they have not brought fundamental alterations to the historical labels. In the US, the EnergyGuide label has remained a continuous scale – with the addition of running costs (despite some stakeholders advocating for more radical modifications [3]). In Australia, the 5-star label has been complemented by additional stars. In China, the ‘1–5’ energy label has remained a numerical categorical label. However it should be borne in mind that this paper does not consist in a literature review of different studies available although the authors fully appreciate the value of the various studies that have been carried out in the past or lately¹. The experiences gained in non EU regions could certainly usefully feed in the future debate around the revision of the label. The authors’ intention in this paper is rather to trigger an early but timely discussion with the whole *labelling*

community so as to avoid experiencing again political tension as it happened in the months preceding the adoption of the 2010 scheme.

WEAKNESSES OF THE 2010 LABELLING SCHEME

The basis of the EU Energy Label is to display the energy performance of a product on a scale, originally a 7-class scale from A (most efficient products) to G (least performing products). This has been decided from 1992 onwards for an increasingly larger number of household appliances. The label becomes obsolete when too many products populate the top classes and differentiation is no longer possible. The rate of obsolescence depends on how the top classes’ boundaries are originally set and the pace of market transformation and technological progress.

Two conflicting interests influence the definition of the classes’ thresholds: satisfy consumer expectations to find top class products on the market, and avoid too frequent updating of the label, due to the perturbations generated on the marketplace. The dynamism of the label is largely determined by finding the balance between these two interests.

In 2003 a temporary solution was adopted for refrigerators and freezers, introducing *sub-classes* A+ and A++. In 2008, it was clear that a more general revision was needed as also other products (e.g. washing machines, dishwashers, air-conditioners) were saturating the top class.

The decision to introduce in 2010 a revised scheme with 3 additional classes with *plusses* (A+, A++ and A+++) on top of class A (see Figure 1) is still new for most products and has not yet provided a fully comprehensive return on experience on how it has affected the individual product categories and the whole EU markets². The preparatory study to the 2014–2015 revision may bring some updates with regard to the market impact of the 2010 revised scheme.

The 2010 Directive prohibits the addition of *plusses* beyond A+++. Article 10.4.d states that ‘the classification shall be reviewed in particular when a significant proportion of products on the internal market achieves the two highest energy efficiency classes and when additional savings may be achieved by further differentiating products’.

NGOs’ assessment

From the consumer and green NGOs point of view, the introduction of *plusses* and the definition of the post-2010 Implementing Measures created more confusion and did not solve in the best way some of the issues identified before the revision.

NGOs were concerned about the concentration of appliances in the top A class before the revision: consumers could be misled by the fact that all ‘empty’ bottom classes were still

1. As this paper is prepared, the authors have been made aware of a study conducted by CLASP with a particular focus on the consumer appraisal of the EU energy labelling scheme as revised in 2010.

2. At the time of writing this paper, implementation measures for energy labelling post 2010 revision have been adopted in September 2010 for household dishwashers (Commission Delegated regulation (EU) N° 1059/2010), household refrigerating appliances (Commission Delegated regulation (EU) N° 1060/2010), household washing machines (Commission Delegated regulation (EU) N° 1061/2010), televisions (Commission Delegated regulation (EU) N° 1062/2010), in May 2011 for air conditioners (Commission Delegated regulation (EU) N° 626/2011), in March 2012 for household tumble driers (Commission Delegated regulation (EU) N° 392/2012) and in July 2012 for electrical lamps and luminaires (Commission Delegated regulation (EU) N° 874/2012). More are expected in 2013 for several heating appliances, vacuum cleaners, domestic kitchen appliances, professional refrigeration and ventilation.

displayed on the label (e.g.: above 95 % of domestic cold appliances were already in A class and above in 2010 in 10 Western Europe countries [4]). This was giving a possible false impression that any A-rated product was still a top performer, while in fact some A-rated were *de facto* close to the bottom of the market at that time. The introduction of additional A+, A++ and A+++ classes has been a short-term 'fix' that allows more room for differentiation at the top, but does not solve whatsoever the issue of misleading empty bottom classes. It is all the more true with the entry into force of Ecodesign measures that ban least performing products and empty the lower energy label classes (for example, Ecodesign requirements for household fridges, freezers and washing machines force all products to be at least at the level of class A; B, C and D classes remain empty).

A second major concern is the definition of measures allowing the co-existence of voluntary and mandatory labelling scales for the same type of product. For example, televisions placed on the European market from 30 November 2011 have to display at least a G to A scale, but could, as deemed appropriate by the manufacturer, rather display a F to A+ scheme; or a E to A++ scheme, or even a D to A+++ scheme (see Figure 2).

Such parallel mandatory and voluntary schemes risk confusing consumers as potentially giving them the impression they will buy the best A product according to the first scheme, whereas in fact, some A++ products may already be available, but not necessarily displayed or perceived at their selling point. (As regard televisions, a recent analysis has showed that numerous A+ and A++ models were ready to enter the market [5]).

A third important concern for NGOs is the potential undermining of the energy labelling impact through the introduction of the class names A+, A++ and A+++. NGOs expressed doubts about the effectiveness of these names in terms of consumer perception (does a consumer perceive as much difference between A+++ and A++ compared to A vs. B?). NGOs based their judgement on a study conducted in 2011, suggesting that 'introducing the new label with its additional categories (A+, A++, A+++) weakened the efficacy of the label, resulting in

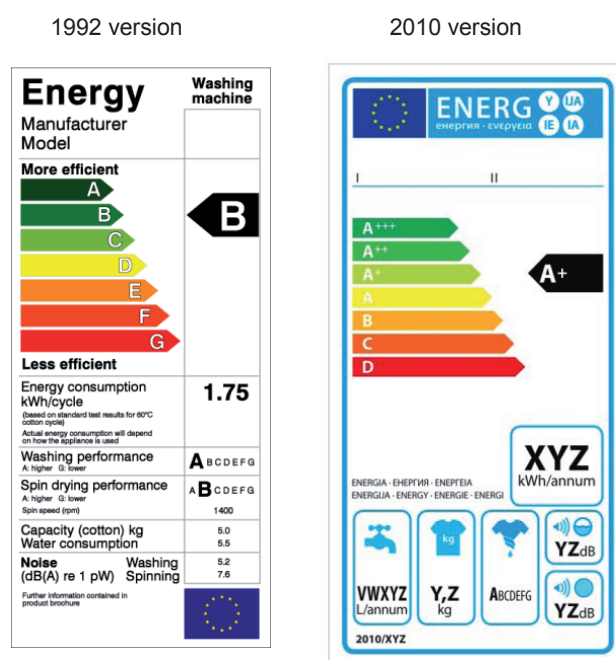


Figure 1. Old and new Energy Labelling schemes (example of household washing machines).

lower consumer awareness of energy efficiency as an important attribute' [6]. For that reason, some stakeholders consider that a simple 'return' to a G to A scheme, with an update of the class boundaries to reflect actual market conditions, should be the main possibility to be considered for the coming revision. Yet, this straightforward solution had not gathered a majority of decision-makers during the 2010 revision.

The household appliance industry assessment

As for industry, while the 2010 revision provided a short term solution to the issue of saturation of the top classes, it just postponed the identification of a strategic solution securing long term investments to a later date.

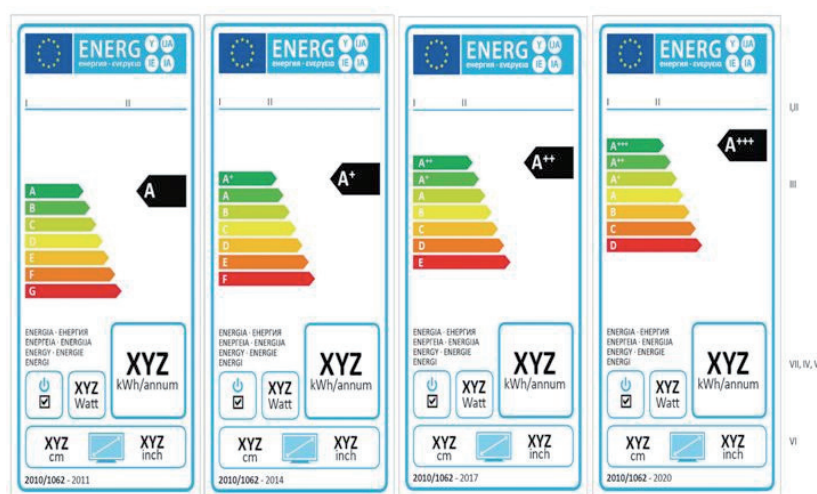


Figure 2. Co-existence of mandatory and voluntary scales – example of televisions (from 30 November 2011, all these displays possibly co-exist in a same retail store).

Industry shared the concern of avoiding products concentration in the top classes, as this undermines the possibility to differentiate products and to trigger innovation and competition amongst manufacturers. Additional classes were seen as a way to *open room* for competition and to avoid visual disruption for consumers. As mentioned, refrigerating appliances have already been subject to additional sub-classes in the label. Some data tend to show that the introduction of A+ and A++ for cold products has had a certain market impact. For instance, between 2003 (date of the introduction of plusses on top of A for refrigerating appliances) and 2010, the market penetration of A+ and A++ cold products increased to reach nearly 50 % in ten European Member States [4]. Industry can attest that the introduction of plusses has favoured the uptake of best performing products. The industry has thus a clear interest to make the best out of the coming revision and properly address the issue of a dynamic and more stable labelling scheme that was not solved by the 2010 revision.

The 2010 revision has generated tensions amongst stakeholders and the resulting compromise decided by the European legislator cannot give full satisfaction to any of them. The 2010 final legal text can be perceived as a way to temporarily close a difficult political file and postpone a more robust and long-term decision to the next revision.

PURSUING A SUCCESS STORY

In the impact assessment accompanying the 2010 revision [7], the Energy Labelling of products had been identified as an effective instrument: about 3 Mtoe of energy savings and 14 Mt of CO₂ reduction annually between 1996 and 2004. The fact that the European Energy label has played a crucial role in forcing manufacturers to recognise the value of energy efficiency and in raising consumer awareness has been confirmed afterwards in other studies [8] and *ex post* measurement campaigns [9]. It is important to insist that despite some limits to the impact being expressed (such as overestimation of savings or inadequate reflect of usage conditions), the reports on the subject tend to recognise the EU Energy Label as a historical success story, worth being pursued.

It is now time to prepare the second revision with a fresh mind and trying to prevent that another disappointing compromise result in definitely turning this past success story into a long lasting failure. The challenge for the 2014–2015 revision may be summarised in this way: how to identify a scheme building on the strengths of the initial G to A scheme to trigger consumers' decisions towards best products, while enabling a dynamic and efficient adaptation to market change?

The goal of this paper is to introduce some proposals that could potentially help responding to this challenge and we do not pretend to possess a universal silver bullet that could solve all issues. The EU Energy Label – as other labels in the world – has specific historical, sociological and political roots that need to be taken into consideration when preparing a revision. Also, we remain convinced that the labelling of appliances *per se* does not seem to be enough to spontaneously shift the market and result in higher market shares for efficient appliances [8]. It needs to be combined to an integrated policy mix. Energy label may also require an integration into a *media mix*, such as using web based tools, social media and communication at point of sales [10].

Preparing the policy revision

ENSURING POLITICAL ACCEPTABILITY AS PART OF A WORKABLE SOLUTION

Both manufacturers and NGOs have strong expectations for the coming revision. Stakeholders involved in this issue are also generally eager to avoid experiencing again the difficult political confrontations of the past and decisions lacking well-documented and indisputable grounds. That is a very legitimate reason to opt for a different approach based on an early collaborative work.

Beyond this common starting point, the previous debate in 2010 has shown how emotional the topic could become, leading to tensions affecting the credibility of the final decision. By anticipating discussions as early as possible this time, it can be expected that some of these potential tensions may be mitigated and that the 2014–2015 revision does not end up being another battlefield where in the end *peace seeking* substitute to the ambition of performing bolder on energy efficiency.

What seems undeniable is that a new or revised energy label scheme would have better chances to work as intended if two main conditions are met:

1. Sufficient time is taken to clarify its priority goals and fine-tune its characteristics accordingly based on shared expertise and well-prepared testing of the possible options.
2. As wide as possible political acceptability is ensured ahead of the final decision.

In the perspective of the second point, some informal exchanges were initiated in 2012 in order to start identifying elements of common interest, on which to build a constructive approach for political acceptance. The authors of this paper and also initiators of this informal discussion platform are permanent members of the Consultation Forum monitoring the development of Ecodesign and Energy labelling policies. They represent one essential federation of European white goods manufacturers³ and two environmental NGOs⁴ active in the implementation process. Other stakeholders occasionally joined the discussion table, but the proposals presented here do not necessarily reflect their views. That is why we believe that extending this initiative towards those missing stakeholders that take a fundamental part in the labelling debate – a.o. consumer organisations, Member States, national energy agencies) is a way to possibly enlarge this political acceptability. But we insist on the equally important first condition of proper scientific appraisal – building on further exchanges with academics and international experts – and above all of robust consumer testing of any of the policy options that would be identified.

3. CECED represents the household appliance manufacturing industry in Europe. Direct Members are Arçelik, Ariston Thermo Group, BSH Bosch und Siemens Hausgeräte GmbH, Candy Group, Daikin Europe, De'Longhi, AB Electrolux, Fagor Group, Gorenje, Indesit Company, LG Electronics Europe, Liebherr Hausgeräte, Miele & Cie. GmbH & Co., Philips, Samsung, Groupe SEB, Vorwerk and Whirlpool Europe. CECED's member Associations cover the following countries: Austria, Belgium, Bulgaria, Czech Republic, Denmark, France, Germany, Greece, Hungary, Italy, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

4. ECOS is the voice of environmental NGOs in standardisation and has contributed since 2007 to the consultations on Ecodesign and Energy Labelling. EEB is the environmental voice of European citizens, representing more than 140 environmental NGO's all over Europe.

FRAMING THE POLITICAL DEBATE THROUGH CLARIFIED OBJECTIVES AND PRINCIPLES

In order to ensure a more transparent and effective way of debating on the EU Energy Label, it appeared to us useful to start our work by trying to formulate some objectives and main principles related to the policy instrument. We reproduce below our joint attempt at this exercise so far. These objectives and principles aim at clarifying what is expected from the label. Their formulation helps framing the debate, however does not preclude a particular solution. We are also mindful that their formulation will raise many questions. As we intent an opening of the debate beyond the initiators of this discussion, we consider that they could be eventually refined and adapted in close future.

The following objectives have been formulated:

The Energy Label is part of the EU environmental and sustainable consumption policy instruments. It should take its part in achieving the following overall objectives:

- Ensuring that the level of consumption and environmental performance of products sold in the EU are compatible with the ecological capacity of the planet.
- Continuously supporting sustainable product innovation and quick market transformation.
- Allowing fair comparability and continuous promotion of front runners.
- Providing consumers with clear information on product main environmental impacts and encouraging them to purchase the best performing models.
- Contributing to sustainable consumption and usage patterns.

Then, a set of general principles to provide guidance on the label formulation have been identified and discussed. They address first the ground foundation of the label (that is the information it is based on), second the layout (i.e. the way the label looks like).

Foundation principles:

- Principle #1. The label should be based on a reasonable number of indicators/information, usually 3 or 4. The main focus should be energy. Balance between energy and other resources and performance shall be ensured, especially when they are correlated.
- Principle #2. All the necessary information should be displayed within the same label in order to allow the consumer easy access to comparison between models.
- Principle #3. The energy information should be available both in absolute value and relative value. Their level of prominence of display should be determined on a product-by-product basis to ensure best consumer understanding. By 'relative' we mean a matrix taking into account technical specificities such as volume, size, functionalities, etc. The absolute value informs about the actual impact of the prod-

uct. The relative value informs about the efficiency of the product in its category.

- Principle #4. The calculation methodologies behind the parameters should be clear, credible and sufficiently close to real life use of the products, provided that uncertainty and complexity remain acceptable. When energy use is substantially influenced by regional variations in the EU (e.g. heat pumps, air-conditioners ...), the label should help consumers evaluate the performance for their geographical situation.

Layout principles:

- Principle #5. Layouts should be as uniform as possible across product groups and visual simplicity should be a priority.
- Principle #6. The main parameter(s) should be displayed in a way that allows clear differentiation and comparability between products and encourages innovating towards the top.
- Principle #7. The layout should include a reference point allowing consumers to quickly spot how the product performs against benchmarks and/or the top of the market at a specific time and/or the regulatory levels set under the Ecodesign Directive.
- Principle #8. The scale and reference should be designed in a way that ensures that consumers are not encouraged to buy products with high absolute impact (even if they are efficient in their category).
- Principle #9. Labelling scales should be used in a way that minimises the need for complicated reclassifications or scale modifications.
- Principle #10. Colour codes are a fundamental component of the layout. They should be used in a simple and understandable way that helps identifying the top performing products on the market.
- Principle #11. The information provided on the paper label displayed in shops should be systematically complemented by more refined information available through internet and smart phone tools. Transparency and standardisation of the parameters used are essential.

POSSIBLE NEW OPTIONS FOR THE LABEL

After these principles were formulated, a set of options and possible label characteristics were compiled, discussed and assessed against the aforementioned principles.

We proceeded by isolating key components of the label, such as the colour code, class names, indexation, vocabulary, etc. Each of these elements was then reviewed in the light of participants' experience and the aforementioned principles. In this paper, only three main options are presented. They are considered by the authors as presenting a certain potential to define the structure of the label and sensible to achieve a breakthrough beyond the current dead-end of piling plusses at the top of the label.

In the following illustrations, we expressly represented each of our concepts in a theoretical way, without integrating them in an existing official labelling scheme. Yet, in order to show

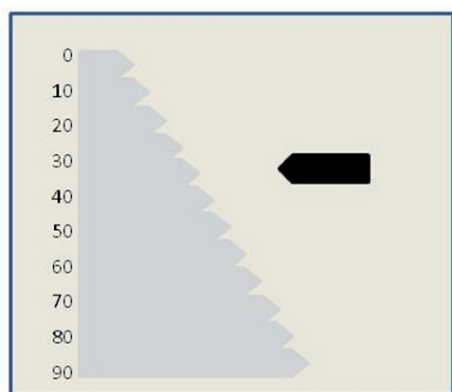


Figure 3. Towards a zero scale – this a purely illustrative scheme not correlated to any product.

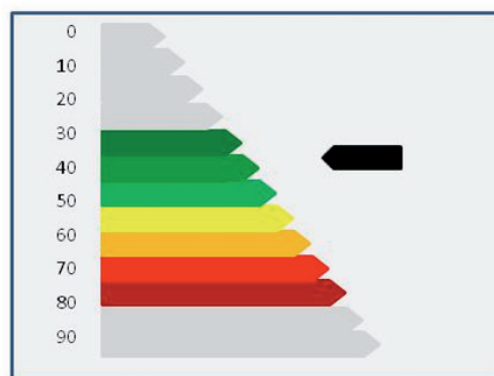


Figure 4. Towards a 0 scale with color code classes.

that these options could be an evolution of the existing scheme, we sometimes illustrated how they could be combined with elements of the existing label. These concepts remain preliminary proposals to be potentially further investigated and analysed in details.

A fixed and constant scale

The first idea would be to move from a current time limited scale (where the top grade – A or A+++ for the labels revised since 2010 – corresponds to the best performers *at a certain moment in time*) to a fixed ‘towards zero’ scale (see Figure 3). By this we mean a scaling scheme that would have the top grade as an absolute and ultimate top value, irrespective of the technology situation today, and that would remain as a fixed and stable background element over time, whatever the generation of the product.

The key element of the proposal is the fixed scale (from XX to 0 – XX being 90 in our graph) and an ultimate ideal target (here the “0”). The 0 could either mean an ideal 0 kWh of energy consumption, or a 0 Energy Efficiency Index, according to the predominant energy metrics to be displayed (see principle 3 above: this could be decided on case by case according to the appropriateness to the product category). This could create long term stimulation towards this ideal reference of ‘net zero energy using products’ [11] and contribute to overcome the possible lack of consistency between different generations of product labels.

The width of the classes and the bottom value (i.e. worst performers) is not discussed here and could be adapted to each product category. The importance is that the bandwidth of the classes is coherent (homogeneous in size) according to the consumption or the efficiency performance, depending on what has been considered most relevant.

The strength of such an approach is that each product is classified once and for all against this fixed and constant scale. A product will always keep the same rating, and there is no need for re-scaling or downgrading product ratings.

The authors have made this proposal of a fixed scale with an ultimate 0, having in mind white goods appliances. But we are aware that technologies producing more energy than they use, such as products integrating renewable energy solutions, could exceed this ideal 0. In that case, another ultimate grade could be set, still maintaining the idea of a stable ideal within a fixed scale.

The use of a specific colour code could be considered in addition, as in the example below (Figure 4). The traditional seven classes colour code could be dynamically used to identify the current offering on the market at a certain time. In the theoretical example below, classes would be only coloured when they are populated. In this case, grey classes would allow consumers understanding the current state-of-the-art, the progress already achieved and the margin for further improvement towards the ideal 0.

The benefit of this scale is that it would always leave the room for improvements and showing more performing products; the lock-in effect into obsolete classes would be avoided. From an industry standpoint, this zero scale would indeed offer some stability and planning certainty for investments into new technologies and constitute a clear challenge to reach top classes. The bottom value to be decided on a product-by-product basis could also remain and illustrate the progress made over time.

One possible objection to this ideal 0 is that it may be at the moment too far away from available best products on the market, and products would rank low on the scale for some time. Another important aspect is that with a fixed scale with unpopulated top classes, consumers would know how the product they are looking at performs against the physical optimum, but not against the current best-in-class on the market. That is the rationale for the second proposal below.

How to identify the best in class?

The second option is the indication of a benchmark on the label with a reference date (see Figure 5).

Beyond the fixed scale towards an ultimate ideal with the score of the concerned product (the black arrow), mention of a benchmark aims at informing clearly about the performance of the best products available in the market at a given time, so that consumers can see how the product they consider purchasing (the black arrow), performs versus best in class (the gold medal). The exact setting of the benchmark would need to be agreed and is not discussed here (i.e. whether it is a real product or an average of the top 5 % of the market, how often it is updated, etc.). It could be correlated to the benchmark as documented within Ecodesign implementing measures, provided there are more standardised rules to define it. It could eventually be linked to the EU Eco-labelling scheme, provided

there are more synergies between Ecodesign and Eco-label requirements. Anyway, it should represent a decently available offer and not a very peculiar niche model.

In this example, the benchmark reference (and eventually the coloured classes if any) would represent the 'dynamic' part of the label requiring a regular updating. It would particularly give some flexibility in how to update the label, as we could play on the benchmark alone (e.g. every 2 years) without having to upgrade the coloured classes. This means that labels would have to be modified for new products placed on the market when benchmark is updated, without the products already in the shops being reclassified (in the example above, the product would always have the same rating – black arrow – whatever the level of the 2013, 2014, 2015, etc. benchmark).

How to best communicate this dated benchmark to consumers remains to be explored. The gold medal we suggest here for exemplifying our proposal is purely for illustration. Alternative options should be evaluated to choose which one is of most immediate understanding. We could for example investigate if the mention of a date in front of a certain class and a certain grade would be understood by consumers, without the need for additional pictogram.

Challenging the use of letters?

The third option investigated would be to consider a continuous scale approach, beyond the sole class approach. The authors are aware that this option could represent a significant move from the historical European label approach and that some studies seem to confirm the superiority of *lettered* categorical labels in consumer understanding [3].

An A to G scale has been an excellent approach, being both simple and understandable across Europe and applicable to markets with a wide range of performance. However, the joint search for being displayed in top class and the closed-scale nature of such a label have been the reasons for most of the difficulties experienced in the EU to find a consensual way of revising the scheme.

Theoretically, a continuous scale may lead to a scheme with a numerical value to identify the product, thus not necessarily keeping the A–G vocabulary (see Figure 6).

In our example, the score of the product (black arrow) encompasses a value, and refers to a coloured class, but not to any letter. The numeric value has somehow substituted the need for a letter, giving much finer information than the letter. It also enables a finer competition within each coloured class, and then contributes to more precise differentiation of products.

A benefit from a numeric value is to enable a simple communication message: *the smaller, the better* (be it the absolute energy consumption or an energy efficiency index).

If combined to the previous idea of a benchmark, this numeric value would have a reference to be compared to (see Figure 7).

Figure 7 gives also the opportunity to exemplify a possible combination of the 3 options that the authors have considered into a single concept illustration: the towards 0 fixed scale, the benchmark and the use of a continuous scale through a numeric value. But the appropriateness of such combination is not to be assumed at this stage.

It is important to further highlight that in this paper, the authors do not take any position in favour of dropping the use of



Figure 5. A benchmark with a reference date.

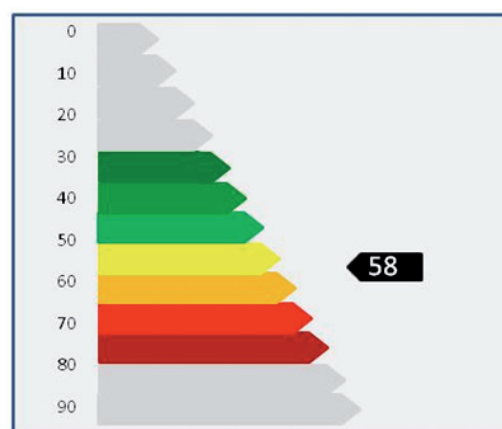


Figure 6. A continuous approach without A to G letters classes.

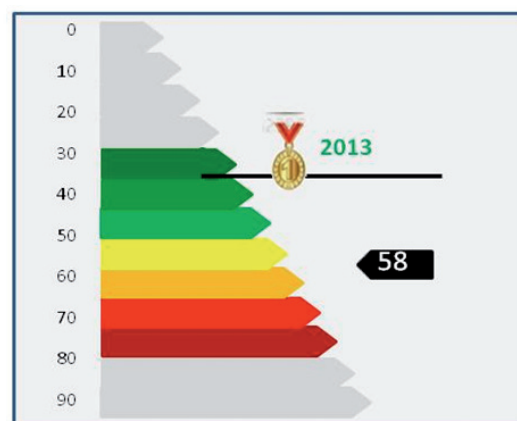


Figure 7. Combining a continuous approach (numeric value) and a benchmark.

alphabetical symbols; this is a decision of political nature to be further discussed on the basis of research evidence. As stated previously, the concepts presented in this paper are theoretical at this stage; they do not prejudice what consumer or stakeholder preferences could be. The aim is to stimulate the debate and show that alternatives to piling plusses on top of A may be envisaged.

Next steps

The three main options presented in this paper are to be seen as contributions to the coming debate. Our intention was to provide fresh and potentially meaningful elements that could be considered by policy-makers. However, a first key step would be to further document and test these options, together with other variables, in the preparatory work to the coming revision of the Energy Labelling Directive. Only robust consumer research and additional exchanges between stakeholders could eventually validate the potential of these options.

According to the authors, the following next steps could be considered:

1. Create a more formalised platform or a more institutional group of relevant stakeholders that could be reacting to these proposals (principles and labelling options), complementing them with other ideas and advancing the discussion through further analysis of scientific literature and reports. In the process of the Ecodesign and Energy labelling Directives revision, it could be envisaged that the European Commission establishes or at least officially supports such an advisory group, consisting of European Commission officials, Member States and stakeholders' representatives. The role of this structure would be to input the consultant in charge of the review study with some new label concepts and assess their overall relevance possibly against a set of commonly agreed criteria. Beyond exploring new ideas, this group could also recommend a set of basic instructions for testing to ensure that the effectiveness and feasibility of the selected options are properly scrutinised. Conducting market research is considered a fundamental step in designing a durable energy labelling scheme by the authors of this paper. Also, if some of the options introduced in this paper seem relevant to all stakeholders, it would be essential to investigate how their design could be improved to maximise their impact on consumers⁵.
2. Ask the European Commission to plan some consumer survey according to an agreed methodology where some of the proposals presented in this paper – if deemed relevant – could be further assessed. Collaboration with research centres, involved in behavioural studies or research programmes centred on consumers could be envisaged too.
3. Analyse further the context and supporting mechanisms that would enable maintaining or even reinforcing the energy labelling positive impacts, especially the mix of instruments required to consolidate an ever-higher penetration of energy efficient appliances but also the mix of media information and training that could complement the traditional display of the label on retailers' shelves and manufacturers' catalogues.

Conclusion

By initiating an informal platform to discuss future evolutions or revolutions in the EU Energy Labelling policy, representatives from the European household appliance industry and

NGOs intended to take a fresh start on this file and contribute to a sound and ambitious revision of the Energy Labelling Directive. The objectives, principles and three concrete options that have been presented here show that some rationality and creativity can still be envisaged in this area after years of difficult politically entrenched discussions. The options presented in the paper are work in progress and would need to be further investigated and refined. They have been selected as potentially making sense for establishing a long-lasting dynamic labelling scheme, compliant with – *or at least not dismissed by* – available studies and reports on the topic. They have been elaborated and discussed sufficiently in advance so that a large number of stakeholders can reflect on them, and preparatory work commissioned by the EU in 2013 to prepare the revision of the Directive can take them into consideration at an early stage. We hope this can contribute to a positive context for the decision-making process. The confrontation to expert advices and scientific testing is now the task ahead to confirm (or not) their actual relevance. If proven so, adjusting their design and their combination could be further investigated with communication specialists to maximise their impacts.

The authors are also aware that a dynamic label requires that the political process to be followed to update the label is lean and coherent with market dynamism. Anytime the market reacts quickly to the political sign coming from a new energy label should be seen as a political success. The revision of the label layout requires at the same time the reassessment of the revision procedures with a similar open mindset.

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