

Minutes of the 2nd Stakeholder meeting

Ecodesign & Labelling Review household refrigeration appliances

Date: Monday 2015-12-14, 10.00-16.00h

Place: European Commission, Centre Broschette, Brussels

The list of attendants is attached as a table at the end of the document.

Introduction

Mr René Kemna (VHK, chair), opens the meeting for the Ecodesign and labelling Review of household refrigeration appliances. Structure of this meeting will follow the interim report published on the website.

Timing Issues

Andras Toth (EC) explained that this is an additional meeting which was not planned, but due to the complexity of the product this meeting was added at the request of the stakeholders. The aim of this meeting is to reach consensus about the technical content (task 1-6) which will be the input for task 7 (policy options), this latter task will be finished in the first quarter of 2016.

Presumably in the autumn of 2016 there will be a Consultation Forum (CF) meeting on refrigerators. The Commission is awaiting the outcome of the revised Energy Labelling Directive so it can be incorporated in the proposals for this CF meeting.

Changes to task 1-4

Hans-Paul Siderius (NL) appreciates that lifetime extension is included and discussed in the update of the report. A significant energy improvement in refrigerators can be seen, so replacing old ones with new ones is good and there is no need for lifetime prolonging. This however might have to be reconsidered when reaching higher improvement levels and further improvements are limited. Therefore, it is worthwhile to see in the LLCC calculation what can be achieved and base this discussion on the findings there.

The chair replies that later in the presentation it can be seen that savings of 90% can be achieved compared to 1995 levels. At this moment we are at 60% savings compared to 1995. It will take years for improvement to be realised. The investigation of lifetime extension can be put in a review clause, which is performed 5-6 years after entry into force of the Regulation, to see how far savings are and ask for a study towards lifetime extension. At this moment it is too soon to include it as there are still large savings potentials to be reached the coming years.

Edouard Toulouse (ECOS) has three remarks:

- During the presentation the chair stated something different than can be read on page 18 of the report. In the presentation the chair stated that they are working on a formulation that would not restrict the scope to only household products and in the report it is still written that it is only referred to household products. What is the right scope?

The chair replies that the reaction of environmental NGO's, that non-household appliances should be included, is added in this presentation. We include comments given by all stakeholders.

- If a circumvention device is found, this should be noted in the test report and Market Surveillance Authorities should be alerted. The regulation should say something explicit about this.

The chair replied that this is not up to the consultants to say something about it. Member States deal with this (fines etc.). Up to now testing facilities were not obliged to notify when a product was wrong but by including this circumvention clause they have to. It was agreed upon that at the very least the regulation could say that if circumvention is detected, the product is non-compliant.

- Looking at the balance energy – material use and savings. According to the AEA-Ricardo study 50% of the products is being replaced (trade-off) within the first 8 years of their life and two-thirds of consumers mention that this due to some deficiency in the product. Extending this period to 10 years might already be beneficial for the material use, if it is not beneficial to extend the overall lifetime from 16 to 18 year. It is therefore interesting to know the failure rates after for instance 2,5 or 10 years.

The chair answers that this type of information is not available and the large effort to retrieve such information on intermediate failure rates (between the end of guarantee at 2 years life and before the average lifetime) is certainly not within the project-budget. Also, it is statistically not possible to prolong the lifetime of only a part of the population without influencing the average of that population unless (hypothetically) measures to prevent a too long lifetime would be invented. In other words, the effect of possible measures, e.g. between 8 and 10 years of life will lead to an increase of the average lifetime and this is not beneficial to the environmental impact, given the saving potential with new products that is still out there. Finally, in practical terms there is the question of how we could achieve what ECOS wants. For instance, if the decision would be to prolong the warranty period then it would have a large economic impact (cost for manufacturers, that would then have to pass this cost on to a higher purchase price) and it would be a decision that would create a precedent for all products, i.e. if it is proportional to do this for a refrigerator –where there is no clear benefit—it would automatically pass for all appliances.

Hans-Paul Siderius (NL) adds that a clear Anti-Fraud Detection clause is proposed in the new Energy Labelling Directive. Test products should not reply to test conditions

Market Surveillance Authorities have to deal with non-compliant products, but there should be somewhere in the Regulation a mentioning of fraud.

On the issue of lifetime extension we need more information and that could be placed in a review clause.

Ina Rüdener (Öko-Institut) states that the durability aspect is not covered properly in this report. There is an increase in share of appliances that have a defect during the first 5 years of their lifetime. The Ricardo study elaborates more on the durability study and a minimum lifetime of 7 years is mentioned. So we should discuss the minimum durability lifetime.

Marie Baton (CLASP) supports the statement by Öko-Institut that the durability aspect is not covered properly in this report and asks for an update of the lifetime calculation. There might be requirements in voluntary labels (ECO-label, Der Blaue Engel, Nordic Swan etc.) and supporting analysis that could be an interesting source of information and inspiration for this part of the study. Jeremy Tait (Tait Consulting Limited) asks to include “non-household” in the scope of the study, similar to the inclusion of wine-coolers and minibars. In the professional refrigerator cooling lot the professional chest freezers are excluded because they should be included in this study. The reason for the exclusion is that the professional chest freezers can be tested similar to the domestic products.

The chair replies to the questions of ECOS that DG ENVIRONMENT has done two projects to research the benefits of life time extension and in both reports the conclusion was that there are no benefits from extending lifetime. Concerning the two year warranty period, DG Consumer should be dealing with this issue. If something can be done about life time extension it is probably in the area of spare parts (e.g. door gaskets), to ensure reparability.

Edouard Toulouse (ECOS) asks to take out the 1990 Japanese example of the report as this is too old and not representative for current discussion. Where does the 16 year lifetime come from?

The chair answers that the 16 year lifetime is based upon studies showing the fridge will have a second hand lifetime of 3-4 years and first-hand life time of 12. In the previous (2007) preparatory study a life time of 15 years was assumed.

Andras Toth (EC) asks if it is possible to test the durability life of refrigerators.

The chair replies that there is no specific test to evaluate the durability life of the complete refrigerator, but the acceptance test for compressors is 20 years. The thermostat or door casqued can be replaced more easily.

Martien Janssen (Re/genT) confirms that there are only tests for components not for the complete refrigerator.

Hans-Paul Siderius (NL) states that the washing machines, dishwashers and dryers had similar discussions. It has to be seen at which point the lifetime extension makes sense. The tests have to be performed in reasonable time otherwise they should for sure not be included in the Ecodesign regulation. Furthermore, he agrees with the chair that the raising of minimal legal warranty periods is not a discussion for this meeting and is a horizontal issue. He also agrees with Edouard Toulouse to update the Japanese fridge example.

In this assignment these issues (lifetime extension, testing of lifetime extension) have not been the most important tasks, but if the consultants cannot deal with these issues at this moment (end of the study is coming) the questions will come up later to the European Commission when presenting documents at the Consultation Forum. These things take a long time to change and will have to be incorporated by all stakeholders so it would be good if we could do some first steps in this revision but of course it has to be seen how this could be feasible. This will be more a task for the Commission to look into these things based on the study.

The chair replies that the Japanese example can be replaced by a future prediction for the EU situation, but he doubts that the outcome will be very different for refrigerators.

Edouard Toulouse (ECOS) states that this is what they are expecting, an update on this issue. The Ricardo study talks about 50% of the products, in 2012, breakdown in the first 8 years.

The chair answers that the main conclusion of AEA-Ricardo report is included on page 65 and it is clear enough.

Anette Michel (TopTen) reminded that at a lot 12 CF meeting the Commission had stated that wine-coolers and minibars were excluded there, because they would be included in the scope of the household refrigeration regulations. She says that the scope should generally be well coordinated with other refrigeration regulation. She adds that there is no general agreement on the built-in factor. A label should show the difference between stand-alone and built-in and better consumer information might be required.

The chair answers that at this moment built-in or not built-in is purely based on declaration by the manufacturer. There is no need for any technical difference. The built-in factor proposed in Chapter 9 is mainly to compensate for the difference in the test method; without it there is a chance that two 100% identical products might have a different rating purely on the basis of declaration and the test method linked to that declaration. That is not helping anyone.

The example of Jeremy Tait of professional chest freezers is interesting in this respect and shows the problems that might arise from not having technical parameters to make a distinction. This is also why the study team would like to ask all of the stakeholders to reconsider the naming “household” and “non-household” in the scope and/or making it more robust in another way.

Chapter 8

No questions or comments

Chapter 9

Martien Janssen (Re/genT) supports the chair that it is difficult to do statistical analysis for wine coolers. He shows a small PowerPoint presentation on this topic.

Edouard Toulouse (ECOS) opposes a compensation factor for glass door use. He suggests having a two-step procedure for wine coolers similar to products that are regulated for the first time under Ecodesign and have a more lenient first Tier. Also there could be a difference between Ecodesign, with compensation factor to keep at least some products available, and Energy Label without compensation factor to clearly show the consumer the difference.

Marie Baton (CLASP) states that if the difference in the test method between built-in and stand-alone reflects the real use there should not be a built-in factor on the label.

Hans-Paul Siderius (NL) states that there will be different kWh because of features and sizes. So there will be little relation between those features and the energy label class. The issue with the built-in is whether separate consumer information, as suggested by TopTen, would do the job or whether it indeed needs to be incorporated in the labelling formula. He guesses this debate might be ongoing until the last moment and the focus is on the average buyer in the average label class and very little on other information that you provide on such a label. Secondly, warning texts are not very much appreciated by industry. All in all he sees rationale for built-in factor, but this will be something that is going to be discussed until the end.

Regarding wine coolers there are large differences, important in principle for glass doors to improve. He wonders if this can be achieved. When these products are not mass produced the cost difference needs to be assessed.

Martien Janssen (Re/genT) states that there is progress in glass door wine coolers, which is also stated in the report but it will never reach the same values as completely insulated doors. Getting to a same MEPS level would be tremendously difficult for glass doors. The request here is to have the same MEPS and a compensation factor could help here.

The chair thinks that having a compensation factor in the Ecodesign regulation and no compensation in the Energy Label is an interesting alternative.

Anette Michel (TopTen) also opposes against the use of correction factors. If inefficient features lead to higher consumption, this should be reflected by the label class. For the Ecodesign requirements there should not be a correction factor in the formula, but a first Tier requirement that can be met by the glass door wine coolers. Furthermore, she does not think it makes sense to use multi-door compensation factors. In China there are fridges on the market with 6 doors.

The chair replies that in the report it is proposed to use a multi-door compensation for 3, 4 or more than 4 doors. Ecodesign and Energy label regulations can have slightly different calculations.

Hans-Paul Siderius (NL) is not happy to single out appliances for some certain compensation factors. At this moment discussion is on compartments and formulas and on the compartments we are discussing compensation factors. For instance for wine storage compartments with a certain design temperature and that would be the correct way for this approach, because otherwise you single out complete appliances instead of using compartment method.

For Market Surveillance the complication is more in the testing of the appliances than the complexity of the formula.

Martien Janssen (Re/genT) adds that CECED has proposed a very strict definition in order to avoid misuse of the compensation factor for built-in appliances.

Edouard Toulouse (ECOS) asks for an example in which stand-alone and built-in fridges are exactly the same. According to his understanding built-in fridges have less insulation compared to stand-alone models.

The chair explains that this is not about less insulation, but it has to do with clearances and air flow during the test.

Martien Janssen (RE/genT) gives a small presentation about the chill compartment compensation, promoting that a factor 1.25 for chill-compartments of a minimum size should be introduced, also because the new standard now uses +2 °C as a design temperature, instead of the 0 °C used before. This means that the rc factor also changes (1.1 instead of 1.25) and thus they need this extra compensation. CECED also mentions that the chill-compartment is ideal for fresh meat and fish, foodstuffs with high CO₂-emissions where food-waste through sub-optimal storage should most certainly be avoided. Finally, the chill-compartment is the only compartment (because always <3 °C) without French Listeria (bacteria).

Hans-Paul Siderius (NL) is not convinced using a compensation factor for chill compartments is the way to go. Manufacturers have the possibility to choose when to use compartments with or without compensation factor and this influences the test method used. He wonders if it was taken into account that the test method indeed increases the temperature of the chill compartment with 2 °C. Since there is a lot of flexibility in this new approach he is a bit weary in introducing new compensation factors for certain compartments that we have now because this could lead to new compensation factors for new/ other compartments. On the spot he is not convinced of this compensation factor. There is also a study from Defra from a couple of years ago where they also looked at this compensation factor and the conclusion was that this was not really justified, but the food preservation arguments will hold.

Martien Janssen (Re/genT) states that the target temperature is +2°C but one of the real-life challenges of the chill compartment, also used for e.g. salad, to never go below freezing (0.5 °C) but also never above 3°C. It also means that a chill compartment typically needs a fan (extra energy!) to get equal temperature distribution.

The chair adds that in the report the starting temperature is from T_c at 0°C (old standard). With the new standard (rc 1.1 instead of 1.25) statements in the report may be reconsidered. Nonetheless, an overall technical model is still missing that would also show the energy-advantages of a chill-compartment being between freezer and fresh food compartment and thus –for part of its envelope—experiencing much lower ambient temperature than +24 °C.

Martien Janssen (Re/genT) reminds that fridge temperatures have an allowance to operate within a much larger temperature range than chillers, i.e. up to 8 K instead of only 3K.

Anette Michel (TopTen) states that there is a mistake in the formula: V_c is mentioned instead of V . She agrees that a chill compartment can have advantages, but the Label's job is to bring transparency – therefore she's opposing a compensation factor.

Jochen Haerlen (BSH) asks to use the average temperature of +2°C instead of using the max and min values. They do not use the whole band width, but rather between 0 – 3 °C.

The chair states that also in the light of a robust metric more time is needed to look into this. The division between to use either the freezer or the refrigerator lies exactly in between the chill and the 0-star compartment

Martien Janssen (Re/genT) agrees with Jochen and adds considering also the momentary spread. So for a chill it is actually the maximum of the maximum temperature, so any peak has to be lower and any peak on the other side as well and that is different for fresh food.

Thomas Ertel (Liebherr) states that fridges without chill compartment can lead indirectly to an increase of CO₂ emissions. Mostly highly perishable foods are stored in this compartment and when a fridge does not have such a compartment people have to go more often to the supermarket and use the car more.

The chair replies that e.g. also a 0 star fridge can be used to store for instance meat.

Thomas Ertel (Liebherr) replies that these are almost not found on the market.

Jeremy Tait (Tait Consulting Limited) asks what the position of the chair is on the Frost Free factors. He wonders if this is 1.2. DEFRA suggested using lower values and stated that they are equally efficient as non-frost-free.

The chair replies that the Australians implemented the new standards already and they use kWh values that suggest a factor of 1.2. For this issue there is no test data according to the new standard, so when looking at the statistical analysis a factor of 1.2 can be found. This issue might be put into a review clause, i.e. to be revisited when more test data are available. At this moment it is not clear if it should be 1,2 or 1,18 or something else.

Please send us comments or proposals with arguments for the compensation factors.

Chapter 10/11

Anette Michel (TopTen) states that the product price seems too high. The market monitoring report shows a price of €465,- per unit in 2014. She suggests using the TopTen report more explicitly, e.g. in task 7.

The chair answers that the price of the sales weighted A+ unit is €435,- and A++ €522,-. The share of A+++ and A++ causes the difference. The data was based on Task 2 for COLD1 and COLD7, but for COLD8 and 9, own desk research had to be done from (Internet) sales data. In any case in the report it will be stated more clearly that price data have a certain bandwidth, also depending on type of outlet and country. The TopTen report has certainly been used but not as the only sources for this section.

Chapter 12

Edouard Toulouse (ECOS) states that he misses costs decrease when more products reach a higher class. At this moment he sees flat costs after the last year.

The chair answers that the overall costs decrease can be taken into account. This has been done in the Ecodesign Impact Accounting project and this will be included in the Task 7 scenarios.

Hans-Paul Siderius (NL) states that costs are relevant for glass doors. Figures have been taken from the Window study, but that would be then a kind of new component for refrigerators where, and certainly when the volumes increase, learning curves could really make an impact. Aiming at LLCC with a LLC that is slowly decreasing but this also depends on the requirements. Please indicate where the assumptions are based on.

The chair replies that the table in the slides indicates improvement in the range 27%-40%. Industry figures and own estimations have been used. The BAT figures show a spectacular efficiency improvement of 60-70% compared to products that were on the market 20 years ago.

Martien Janssen (Re/genT) states that in the COLD7 case, in the beginning of the presentation, double thermostats were mentioned. Most fridges consist of a compressor and solenoid valve. But they do not switch the freezer and fridge evaporator, as is suggested, but between freezer only and freezer+fridge. Thus the average evaporator is lower than suggested. With some new technologies and VSD the manufacturers might get at higher evaporator temperatures through better switching/control, but this is a future option.

Philippe Rivière (Armines) replies that what is modelled as 1 thermostat has constant temperature for freezer and refrigerator. Furthermore, some reports have been found about alternating solenoid valves on the evaporator of the freezer with some gains despite refrigerant charge issues, which are mentioned. Maybe the technologies behind this could be included in the analysis but this needs further research.

Martien Janssen (Re/genT) replies that some technologies behind this use VSD compressor in combination with no return valves and these components handle the refrigerant distribution issue. It is in principle a difficult topic to get gain of the system to get really good use of the high temperature during the fresh food phase. Mostly because of the fact that when only running the fresh food phase the capacity of the compressor will be very large, even when you go to the smallest VSD compressor which will lower the efficiency during the fresh food phase. There are publications or studies on this, but he thinks everybody here has been playing and using them. However, it is not in practise so it is one of the future options, but it is at BNAT level at this moment.

The chair states that the stakeholders can send in written comments before 15 January 2016. The end of January is the deadline and end of contract of this project so if things are not clear it can be discussed in the technical assistance before the CF meeting in the autumn of 2016.

Andras Toth (EC) agrees that there will be an opportunity to further elaborate on the conclusions of Task 7 of the final report in the impact assessment and in the working documents to be prepared for the Consultation Forum. However, any major issues with Tasks 1-6 of the final report should be tackled before the report is finalised.

Edouard Toulouse (ECOS) asks if the chair has an idea how many scenarios will be addressed in task 7.

The chair asks the stakeholders to come up with suggestions for scenarios. Mostly there are 3 scenarios outside the business as usual (BAU). Coming up with for instance an industry, NGO and MS proposal then this could be considered for the scenario analysis.

Martien Janssen (Re/genT) states that among the industry there is a general consensus not to have constant-width label classes but to have fixed percentages of increment between the classes of the Energy label.

The chair notes that this is a possibility, but one would have to accept that –as classes grow smaller when moving towards the top—the lower classes would have a relatively large width (given that the total number of classes is limited). He asks the stakeholders to send in their proposals.

The chair thanks everybody for coming and participating. Deadline for written comments is 15 January 2016.

Meeting closes at 16.00h.

List of participants

First name	Surname	Company / organisation name
Ciara	Leonard	AB Electrolux
Philippe	Rivière	ARMINES
Andrea	Harrer	BAM Federal Institute for Materials Research and Testing
Jochen	Haerlen	BSH Hausgeraete GmbH
Viktorija	Krastinyte	CECED
Matteo	Rambaldi	CECED
Marie	Baton	CLASP
Bernt	Andersson	Dometic Group
Edouard	Toulouse	ECOS
Andras	Toth	European Commission
Thomas	Ertel	Liebherr
Hans-Paul	Siderius	Netherlands Enterprise Agency
Ina	Rüdenauer	Öko-Institut e.V.
Martien	Janssen	RE/genT BV
Jeremy	Tait	Tait Consulting Limited
Anette	Michel	Topten International
Rene	Kemna	VHK
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Wai Chung	Lam	VITO