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**The Consumer Voice in Europe**

## CONSUMER ORGANISATIONS COMMENTS ON ECODESIGN AND ENERGY LABELLING FOR HOUSEHOLD REFRIGERATING APPLIANCES

European Commission's draft legislative  
proposal of November 2017

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## Why it matters to consumers

Thanks to EU rules, refrigerators are now approximately 60% more energy-efficient than in the early nineties. On top of benefitting consumers' pockets, they have also become less noisy. But fridges and freezers are becoming more complex and bigger. It is time to update the Ecodesign and Energy labelling measures to ensure that such appliances become last longer and consumers save more on energy.

## Summary

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Household refrigerating appliances, or fridges, are covered at EU level by both Ecodesign requirements<sup>1</sup> and Energy labelling<sup>2</sup>. We welcome that the European Commission is now reviewing these requirements to reflect technological developments.

In this paper, ANEC and BEUC give recommendations pertaining to the draft legislative proposals put forward by the European Commission in November 2017.

We welcome that the current proposal leads to stricter requirements for refrigerators of bigger capacity, hence avoiding their unjustified promotion through the Energy label.

We ask the European Commission to better assess the economic impact of the energy efficiency requirements, and to ensure that ambitious requirements - which we support in principle - do not come at the expense of low-income households. We call for more resource efficiency requirements to be put forward, i.e. related to durability, reparability and spare part availability. Furthermore, it is of utmost importance that only natural refrigerants and foam-blowing agents are used.

We call on the Commission to reduce the correction factors. Especially, multi-compartment refrigerators should not be given an unjustified energy consumption allowance. In addition, testing methods must reflect real-life conditions as much as possible.

Finally, we call for the pictograms on the Energy label to be straightforward and tested upfront amongst consumers. We also provide recommendations about the design and methodology of the survey.

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<sup>1</sup> Commission Regulation (EC) No 643/2009.

<sup>2</sup> Commission delegated regulation (EU) No 1060/2010.

## 1. GENERAL COMMENTS

### 1.1. No circumvention allowed

We welcome that the clause on circumvention, as already stated under the new Energy label framework, is reiterated under this proposal. This clause explicitly defines that a product shall not be designed in such a way that its performance automatically differs in test conditions with the objective of reaching a more favourable performance.

### 1.2. No advantage for bigger appliances

We strongly support that the current proposal leads to stricter requirements - compared to the current regulation - for larger refrigerators. Indeed, the proposed formula calculating the Energy Efficiency Index takes into account the volume-dependence of the energy use of the appliances by introducing new parameters. ANEC and BEUC have for long stated that appliances of bigger capacity should not be unintentionally promoted by Ecodesign and the Energy label.

## 2. SCOPE

### 2.1. The scope must include all wine storage appliances

Currently, it is not clear if wine storage appliances with a display function will be ecodesigned at all. In the draft Ecodesign proposals for both household and commercial refrigerators, these appliances are explicitly excluded from the definitions. However, the annex includes requirements for wine storage appliances. We expect these products to be also included in the household refrigerating appliances regulation. Else, these appliances would very likely stay unregulated for an undefined period of time. It is currently still unclear when a regulation will be in force for commercial refrigerating appliances and if wine storage appliances will be covered by that regulation at all.

- All wine storage appliances should be in the scope of the household refrigerating appliances regulation. Additional requirements for wine storage appliances with display function must then be put forward.

## 3. ECODESIGN PROPOSAL

### 3.1. ENERGY EFFICIENCY

#### 3.1.1. Need to better assess the economic impact of the requirements

According to Commission's projections, the requirements put forward for household refrigerating appliances would lead to a ban of 20% of the models from the market in 2020 and of another 18% of the models in 2023. However, the industry representative

claims that the requirements would ban the majority of the models currently on the market<sup>3</sup> and therefore that the requirements are too strict at least within the time frame proposed by the Commission.

To better judge the economic impact of strict Ecodesign requirements on low income households, we ask for more detailed information about low-priced, smaller 'type-I' fridge-freezers with only a small 3-/4-star sub-compartment. For example, information about the increase of purchase price, decrease of energy consumption and thus impacts on the life cycle costs should be disclosed.

**→ We welcome that the Commission is proposing ambitious requirements. It must be ensured that low income households are not penalised. The Commission must carefully assess the possible unwanted consequences arising from strict energy efficiency requirements.**

## 3.2. RESOURCE EFFICIENCY

### 3.2.1. Durability and reparability must be better addressed

It is not acceptable that barely any resource efficiency requirements are proposed on the grounds that there is still potential for energy efficiency savings. We do not agree that it renders lifetime extension of those appliances useless as it would 'stagnate the entry of new, more efficient models on the market'. Ecodesign has made refrigerators more efficient, hence the necessity to ensure that they are used longer. The break-even point where a replacement was feasible because of energy efficiency has been shifted back but if the machines fail early, there is little win for the consumer<sup>4</sup>.

Ecodesign has a very strong role for ensuring the longer life time of products. We call for three elements that implementing acts for Ecodesign specific product groups should stipulate:

#### Durability criteria

Firstly, we advocate in favour of the establishment of product specific technical durability criteria as provided for by the Ecodesign framework Directive. Such criteria have already been successfully established for vacuum cleaners and lighting. Member States are obliged to carry out public law enforcement on the whole product group in case the Ecodesign requirements (including durability) standards are not met.

#### Manufacturers' guarantee

Secondly, we call for a manufacturers' guarantee for a specific minimum period of time to be set in the specific ecodesign implementing measure. Manufacturers shall guarantee to repair or replace faulty products within this period. In general, the set periods should correspond to good market practices, consumer expectations and the average consumer

<sup>3</sup> I.e., according to CECED database 2016, 38% / 91% of all fridges (tier 1 / tier 2), 41% / 82% of all fridge-freezers and 36% / 83% of all freezers.

<sup>4</sup> In addition, GfK data (see Prakash et al. 2016<sup>4</sup>) shows that the percentage of large household appliance replacements due to a defect accounted for 57.6% in 2004 and 55.6% in 2012 among the total product replacements. Especially the share of appliances that were replaced due to a defect within the first 5 years has increased substantially. See Annex 1.

use on which any technical durability criteria should also be based. For white goods, such as refrigerating appliances, washing machines, or dishwashers there should be a guaranteed durability of at least five years.

### **Consumer information about durability**

The guarantee duration should also be indicated on the packaging of the product. This guarantee should be communicated in a clear manner to consumers such as in a specific number of years. We fear that technical units such as those currently indicated for lighting products, i.e. nominal life time of the lamp in hours, is unclear for consumers. In addition such indications normally cannot be verified by consumers and are, therefore, of limited use.

- **Implementing acts for Ecodesign specific product groups should stipulate durability criteria, manufacturers' guarantee and consumer information about durability.**

In parallel, we also propose additional requirements on reparability and to align with the proposal pertaining to household washing machines and washer-dryers and household dishwashers.

- **Add requirements on dismantling for the purpose of avoiding pollution and for material recovery and recycling, spare parts availability, spare part maximum delivery time, access to repair and maintenance information.**

### **3.2.2. Spare parts must be made available at limited cost**

We welcome that the Commission proposes a requirement regarding reparability of gaskets, i.e. gaskets shall be replaceable without special tools and manufacturers shall be able to supply end-users with fitting door gaskets for their household refrigerating appliances for at least 10 years after the production of the specific model has ceased. However, we note that it will not be sufficient to make repair economically attractive for consumers. According to a survey from our German member, Verbraucherzentrale Bundesverband, exorbitant costs is the most important reason why consumers do not repair. Yet, according to the same survey, 70% of consumers consider the right to repair to be important<sup>5</sup>.

- **Gaskets and other spare parts must be made available at limited price for consumers. For this sake, we encourage the Commission to work more closely with Member States and other DGs at the Commission to take additional legal and non-legal measures.**

### **3.2.3. Need for a requirement on used refrigerants and foam-blowing agents**

The use of refrigerants and foam-blowing agents – the latter related to the insulation of the refrigerators - can lead to negative impacts for the environment and by extension, to humans. Currently in Europe, natural refrigerants and foam-blowing agents are the most used in household refrigerating appliances. Recently however, a new generation of refrigerants called hydrofluoro-olefins (HFOs) has been developed. Although it has a

<sup>5</sup> [http://www.vzbv.de/sites/default/files/downloads/2017/06/01/umfrage\\_-\\_haltbarkeit\\_und\\_reparierbarkeit\\_von\\_produkt\\_o\\_gewaehrleistung.pdf](http://www.vzbv.de/sites/default/files/downloads/2017/06/01/umfrage_-_haltbarkeit_und_reparierbarkeit_von_produkt_o_gewaehrleistung.pdf)

low(er) global warming potential, their long-term impact on the environment is not clear and their decomposition in the atmosphere releases partly persistent, harmful by-products. Furthermore, there are additional safety risks in terms of combustibility and flammability.

- **The European Commission should only allow the use of natural refrigerants and foam-blowing agents when used within household refrigerating appliances.**

### 3.3. PRODUCT INFORMATION

#### 3.3.1. **Include information about the maintenance of the appliance**

We welcome that the Commission puts forward product information to be mandatorily reported in the instructions manual. The Commission could also include an information requirement on how to best maintain refrigerators, as this ensures energy efficiency as well a prolonged lifetime for the appliance.

#### 3.3.2. **Clearly indicate the intended use of wine storage appliances**

Under the current proposal, manufacturers of wine storage appliances must indicate in the instructions manual that 'this appliance is intended to be used exclusively for the storage of wine'. Simply informing consumers, in manual of instructions, that the appliance is only intended for the storage of wine is not sufficient as the manual is often not accessible before purchase.

- **The European Commission should:**

- **include an information requirement on how to best maintain refrigerators.**
- **ensure that wine storage appliances go together with clearly displayed information at the point of sale about the fact that they are not suitable for products other than wine.**

## 4. ENERGY LABELLING PROPOSAL

The proposed label is rescaled based on the new energy label framework, going back to the well-known A-G scale (deletion of the plusses).

## 4.1. PROPOSED LABEL AND PICTOGRAMS

### 4.1.1. Pictograms must be self-explanatory and limited in numbers

Currently, the Energy label for refrigerators is relatively well understood by consumers<sup>6</sup>, especially when compared to the Energy labels for other appliances. It is important to maintain the label comprehensibility and straightforwardness, hence avoiding the addition of new pictograms which 1) have not been tested among consumers and 2) might overload the well-understood label.

Especially, we have doubt about the comprehensibility of the new proposed pictograms, i.e. 'sum of the volumes of all chill compartments' and 'volumes of all unfrozen compartments except fresh food'. We doubt such detailed information about compartments is necessary for consumers at purchase.

- **The Commission should – in the first place - assess the need of displaying certain new information on the label. Only if consumers express their interest in obtaining this information, its comprehensibility can be tested.**  
In this context, we also remind the Commission that the Energy label is first intended for consumers.

### 4.1.2. Key information must stand out

We welcome that key information such as the scale and the annual energy consumption stand out in the proposed label.

- **Would the Commission need to rework the proportion of the label following the stakeholder consultations; sufficient room must remain for the scale as well as for the energy consumption.**

### 4.1.3. Need to simplify the noise emissions pictogram

The information on the airborne acoustical noise emission is not self-explanatory. As the noise emissions are following a logarithmic curve, the interpretation of the numerical information is difficult for consumers. An increase in 10dB means approximately a doubling of the perceived sound level. Furthermore, and according to a survey by Verbraucherzentrale Rheinland-Pfalz<sup>7</sup>, current pictograms about noise emissions are only understood to a limited extent. See below a quote from consumer:

Jasmin: “ (...) We don't talk in decibels very often, and I simply don't know how many decibels would annoy me. It would be helpful if I could read somewhere that quiet fridges range from such-and-such a number to such-and-such a number...”

<sup>6</sup> See study consumer survey from Verbraucherzentrale Rheinland-Pfalz 'Comprehensibility of the EU Energy Label – Results of two focus groups and a representative consumer survey' (2014)  
[https://www.verbraucherzentrale-rlp.de/sites/default/files/migration\\_files/media231718A.pdf](https://www.verbraucherzentrale-rlp.de/sites/default/files/migration_files/media231718A.pdf)

<sup>7</sup> idem.

- **The Commission should look into the possibility of developing three transparent or filled sound waves, corresponding to low, medium and high noise emissions.**

Although the three classes and their limits would need to be defined, the draft regulation on energy labelling for dishwasher (2017) can be an inspiration as it introduces such a change, see in Annex 2.

#### **4.1.4. Full label must be displayed in any kind of selling**

In the case of distance selling (on the internet or not), and in visual advertisements and in promotional material, the Commission proposes to display, instead of the label, an arrow with the energy efficiency class. This means that the full label, with the clear and well-understood A-G scale does not need to be mandatorily disclosed in these cases. We fear the proposal is not sufficient to allow for a well-informed purchase decision.

- **In the case of distance selling (on the internet or not), and in visual advertisements and in promotional material, we ask the Commission to:**
- test the arrow proposed in the context of the consumer survey, and if the comprehensibility is too low,
  - impose that the full label is displayed

### **4.2. CONSUMER SURVEY AND DESIGN METHODOLOGY – GENERAL COMMENTS**

We welcome that the European Commission has now launched the consumer survey on the comprehensibility of the proposed label for household refrigerating appliances. However, after commenting on the consumer survey for the Energy label for displays, we reiterate the following general comments that can also be applied for this product group:

- Consumer survey results must be made available on time, i.e. they must serve as a starting point for discussion, and therefore be available before the discussion in the Consultation Forum starts.
  - Aim for geographical representativeness over time.
  - Icons tested must reflect what consumers want to know.
  - Question should be unambiguous.
  - A differentiated presentation of results per user group is needed.
  - Survey should also be undertaken offline.
  - The annual energy consumption must stand out.
  - More space for key information, and no room for unclear and low-interest pictograms.
- **We ask the Commission to take into account our general comments regarding the design and methodology of consumer surveys for the developments of upcoming new Energy labels.**

## 5. MEASUREMENTS AND CALCULATIONS

### 5.1. Testing methods must be representative of real-life use

Currently, the energy consumption test for refrigerators is undertaken in steady state operation, e.g. in stable ambient temperature, humidity and settings, with no door openings. As these testing standards are of course very far away from real life conditions, there is a risk that values obtained undermine the accuracy of the label, hence consumers trust in the label. We invite the Commission to take into account the results obtained by STEP team<sup>8</sup> in 2017.

- **There is a need for testing methods which reflect real-life conditions as much as possible.**

### 5.2. Correction factors should not reduce transparency for consumers

Although we welcome that e.g. the climate-class factor has been eliminated and that other correction factors have been reduced<sup>9</sup>, it is in our view not ambitious enough. As already stated during the preparatory study phase, we believe that chill-factor should be eliminated in order to increase transparency for consumers. For the same reason, we do not agree with the addition of new correction factors.

Especially, we disagree with the correction factors for multi-compartment refrigerators. According to the Commission, such refrigerators could save on food waste as they enable better food preservation. As the potential in food waste reduction is considerably more beneficial than the potential in energy consumption, an allowance in energy consumption is proposed. We disagree with this proposal as it is too heavily based on the assumption that consumers would properly sort their food in refrigerators. Based on exchanges with our membership, we understand that already with 'standard' refrigerators, this task is complicated. Before putting forward such correction factors, the European Commission must provide evidence on the assumption that consumers would properly sort their food in refrigerators. Without such an assumption being confirmed, food waste prevention gain cannot be assumed. Moreover, an allowance would have the effect that such refrigerators cost consumers more to operate but they would not have transparent information about this before taking a purchase decision. In our view, avoiding food waste and saving energy are two important goals which should not be outweigh one for the other.

We detail our arguments against this correction factor in Annex 3. We especially disagree that this correction factor is used under energy labelling as it means that multi-compartment refrigerators might reach a higher class than it normally should. It is misleading information for consumers.

<sup>8</sup> Closing the 'Reality Gap' – Ensuring a Fair Energy Label for Consumers: <http://eeb.org/wp-content/uploads/2017/06/Reality-Gap-report.pdf>

<sup>9</sup> Other correction-factors have been more than halved: 1.1 for no-frost, 1.1 (freezer) or 1.04 (fresh food) for built-in.

→ **The European Commission should not set correction factors for multi doors compartments**

## 6. EDITORIALS COMMENTS

### 6.1. ECODESIGN DRAFT LEGISLATION

- Annex III: numbering should be checked (e.g. No. 1 is twice).
- Annex III p. 17 In the definition for Edaily, a factor 0.5 is missing.
- In table 4 the value for factor 'D' for appliances with 1 or 2 doors (D = 1) is missing.

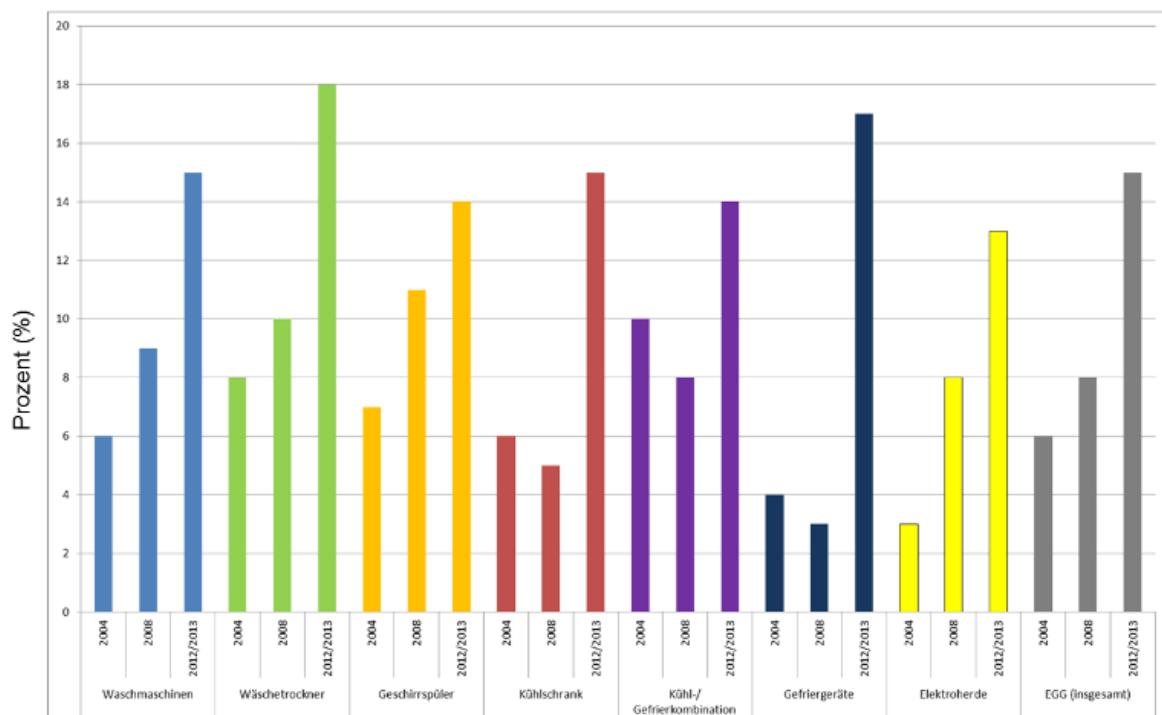
### 6.2. ENERGY LABELLING DRAFT LEGISLATION

- Article 3 refers several times to 'Annex II', this should be 'Annex III'.
- Obligations of dealers (Article 4): The information that this is Article 4 is missing.
- The definitions (Annex 1) should be identical to those of the ecodesign regulation (e.g. definition No. 26 on 'door heat loss factor' is not consistent). Also a definition for 'target temperature' is missing.
- Table 3 in Annex IV should be named 'table 2'.
- Table 4 in Annex IV should be named 'table 3'.
- Numbering in annex IV starts with '4'. The numbering should be corrected.
- Annex IV, p. 24: In the definition for Edaily, a factor 0.5 is missing.
- Annex V (i): freezing capacity should be in kg/12 h.
- Annex V (m): fragment?

**Annex 1: Share of maximum 5-year-old household appliances – including refrigerators - within all replacement purchases due to the reason 'the old appliance had a defect'.**

Refrigerators ("Kühlgeräte"), fridge-freezers ("Kühl-Gefrierkombinationen") and freezers ("Gefriergeräte")

Abbildung 13 Anteil der max. 5 Jahre alten Haushaltsgroßgeräte an allen Ersatzkäufen innerhalb der Kategorie „das alte Gerät ging kaputt“<sup>24</sup>



Quelle: Eigene Darstellung; berechnet nach GfK-Daten (2004: n= 2712; 2008: n=3380; 2012: n=5664 für EGG gesamt)

Source: Prakash, S.; Antony, F.; Dehoust, G.; Gensch, C.-O.; Graulich, K.; Gsell, M.; Hilbert, I.; Köhler, A. R.; Schleicher, T. in collaboration with Stamminger, R. (2016): Influence of the service life of products in terms of their environmental impact: Establishing an information base and developing policies against "obsolescence" [Einfluss der Nutzungsdauer von Produkten auf ihre Umweltwirkung: Schaffung einer Informationsgrundlage und Entwicklung von Strategien gegen "Obsoleszenz"], UBA Texte 11/2016, Dessau.

**Annex 2. Acoustic airborne noise emission classes, as proposed in the draft legislative text for Energy labelling for dishwashers (in annex).**

**B. Acoustic airborne noise emission classes**

The acoustic airborne noise emission class of a household dishwasher shall be determined on the basis of the acoustic airborne noise emissions as set out in Table 2.

The acoustic airborne emissions of a household dishwasher shall be determined in accordance with state-of-the-art of the recommended standard.

*Table*  
*Acoustic airborne noise emission classes*

2

Energy efficiency class	Noise (dB)
Light 	$n < 38 \text{ dB}$
Medium 	$38 \leq n < 47$
Loud 	$n \geq 47$

Source: Commission, draft energy labelling for dishwashers November 2017.

**Annex 3:** Argumentation on why ANEC and BEUC do not support a correction factor for multi-compartment refrigerators.

Firstly, the idea that multi-compartment refrigerators could save on food waste (due to better food preservation) **relies too heavily on the assumption that consumers do/will sort properly their food in refrigerators.** We therefore ask the Commission, whether this assumption has been tested on real consumers. According to Table 17 on p. 116 of the study, it seems consumers would need detailed knowledge on where to put the food at the right place in the multi-compartments fridge (e.g. depending on the variety of fruits/vegetables, they may not belong in the same compartment). The instructions that consumers should normally follow today with 'standard' fridges (cooler + freeze) are copy pasted below (extracted from p. 117 of the study "Optimal food storage conditions in refrigeration appliances" by VHK). We wonder how many consumers are aware of it and/or do it in practice.

*"The average traditional fridge/freezer combinations have a freezer compartment (-18 °C) and a main cooling compartment with maximum temperatures varying between 4 and 7°C. In the lower sections of this cooling compartment, temperatures can be a bit lower than in the upper segments. Vegetables and non-tropical fruit are generally kept in the lowest section of the cooling compartment, and raw meat and fish in the section right above. The upper section is for opened cans and soft drinks. The middle section is for pastry, soup, processed meat products and left overs. The upper sections of the refrigerator door are for butter and cheese, just below are the eggs, little tubes and cans. Lowest compartments in the refrigerator door is for big bottles, milk, yoghurt, etc. In short, the temperature differentiation is limited and range from 1-2 to (depending on the settings) 4 to 7 °C."* (VHK-Study, p. 117).

Secondly, it is also important to have a look at **which foods are wasted the most by households**, and whether these are typically foods you would store in a fridge or not. Although data is patchy, it appears that in most EU countries, fruit and vegetables followed by bakery products, meat/fish, milk and dairy and staple are the most wasted foods. It is suggested by the study itself, based on data from the UK charity WRAP. We wonder however if all these products are to be stored in fridges. We have doubt for fruits as well as bakery products and staple foodstuffs such as rice or breakfast cereals.

Thirdly, when it comes to perishable products such as meat, fish and even some dairy products, **a key factor influencing consumers' behaviour is the 'use by' date.** In the event that the multi-compartment fridge could prolong the shelf life of these products, as the report suggests, it would make little difference so long as the 'use by' dates remain the same. This is acknowledged in the report. However, this is a very strong limiting factor in our view. Food manufacturers want to be on the safe side and for liability (and sometime marketing) reasons, they tend to be extra cautious when setting the 'use by' date. In the case of the multi-compartments fridge, the extra shelf-life depends a lot on consumers, i.e. whether they put the food at the right place, whether the fridge is working properly, is clean, etc. Manufacturers are unlikely to take the risk to prolong the 'use by' date for too long a time when so much parameters fall beyond their control.

Finally, it is also useful to consider the main causes for food waste at consumer level. The [2010 BIO IS study](#) lists the following

- Lack of awareness of (1) the quantity of food waste generated individually, (2) the environmental problem that food waste presents, and (3) the financial benefits of using purchased food more efficiently.
- Lack of knowledge on how to use food efficiently, e.g. making the most of leftovers, cooking with available ingredients.
- Attitudes: food undervalued by consumers, lack of necessity to use it efficiently.
- Preferences: many (often nutritious) parts of food are discarded due to personal taste: apple skins, potato skins, bread crusts for example.
- Planning issues: 'buying too much' and 'lack of shopping planning' frequently cited as causes of household food waste.
- Labelling issues: misinterpretation or confusion over date labels is widely recognised as contributing to household food waste generation, leading to the discard of still edible food.
- Storage: suboptimal storage conditions lead to food waste throughout the supply chain, including in the Household sector.
- Packaging issues: packaging methods and materials can impact the longevity of food products.
- Portion sizes: includes issues such as "making too much food" hence leading to uneaten leftovers as well as purchasing the correct portions of food; individually sized portions can minimise food waste but often create additional packaging waste.
- Socio-economic factors: single person households and young people generate more food waste.

Clearly, suboptimal storage is just one among many aspects.

Overall, the case for this new type of fridges does not seem very convincing for households, when considering the cost/benefit balance.