



Refrigerating appliances with a direct sales function Recommendations on the final Ecodesign and Energy Labelling proposals

December 2018

Ahead of the Member States' vote, we would like to support the Ecodesign and Energy Label regulations proposed by the European Commission. We strongly believe it is crucial that the text is adopted swiftly, and oppose any postponement of the entry into force date beyond 1 September 2020 as currently proposed. In the event of a change in the implementation dates, thresholds' ambition should be revised accordingly. We also have a number of recommendations on how to further improve the text.

Reintroduce a transparent energy efficiency formula

Since the 2014 proposal, the Annual Energy consumption (SAE) formula has been made much less transparent by introducing new modelling parameters on top of the M and N parameters. **We urge decision-makers to return to the initial formula and remove the two new parameters (C, P) and the sub-parameters to the original Y parameter:**

$$SAE = (M + N \cdot Y) \cdot 365 \text{ ~~-C-P~~}$$

We believe that with the introduction of **parameter C** which favours appliances that can cool at lower temperatures, manufacturers will be incentivised to produce appliances that reach lower temperatures and, therefore, consume more electricity.

In the case of **beverage coolers and ice-cream freezers**, the calculation of Y has also been made more complicated by adding sub-factors and EEI values are 30-40% lower for ice cream freezers than in the 2014 proposal. As a minimum, we suggest removing the climate class factor from the formula, which can lead to a 10%-20% allowance for appliances in the highest tropical class, building on the experience from the domestic refrigeration case.

Furthermore, beverage coolers should be required to use the Net volume in the calculation of V_{eq} , instead of the gross volume as the current proposal could create an incentive to unnecessarily increase the unusable volume that needs to be cooled.

Finally, we call for removing the 10% allowance given to **non-remote supermarket cabinets** through the P value to ensure a fair comparison in between the two different technologies.

In general, we firmly believe that the calculations and formula should be transparent and the same for all technologies, ensuring a level playing field. MEPS stringency could then be adapted to take into account technological differences as stipulated in the recital. The current proposal will disfavor

efficient technologies and incentivise manufacturers to produce devices with larger compressors (to reach lower temperature thanks to the C coefficient) or built for tropical climates (as it has been observed for household refrigerators with factor Cc).

Tighten the requirements for ice-cream freezers

For ice-cream freezers, because of the new formula and the new test method (EN 16901), the EEI values are on average 55% lower than the 2014 proposal (EN ISO 23953). In 2014 the average model on the market was set to EEI=100; measured according to EN 16901 and calculated with the new formula, the same model would now have an EEI of approximately 45 (class D).

As a result, even the second tier of EEI<80 in 2023 will allow the sale of products that are twice as inefficient compared to 2014 “average” models. This leaves absolutely no incentive for the market to develop. We call on decision makers to introduce a specific requirement for ice-cream freezers as suggested below. Here also, we would like to recall the importance of a fair formula, as described above.

Table 3: Maximum EEI for ice-cream freezers, expressed in %

From 01/01/2020 onwards	80
From 01/01/2023 onwards	50

Adapt the label conditions to the B2B market

Obligation for dealers

The current phrasing does not take into account the fundamental differences between B2C and B2B markets. The specifications under the obligations of dealers (EL Article 4b) require the label to be presented in proximity to the price of the product in case of distance selling through the internet; this is not sufficient to guarantee that the energy efficiency class is shown online because many manufacturers and dealers do not mention the price in the first place. We propose to adapt Annex VIII of the Energy Label proposal as follows:

The appropriate label made available by suppliers in accordance with Article 3(1)(g) shall be shown on the display mechanism in proximity to any material concerning a specific model of a refrigerating appliance with a direct sales function.

Obligation for suppliers

In the B2B market, suppliers showcase their product lines on their websites and redirect buyers to local dealers that will deliver an individual quote for the product for the purchase. The supplier is not actively promoting its product but passively showing them on their website. However, we believe that these websites serve as an important decision-making platform which in itself is a significant part of the sales process.

In the article on responsibilities of suppliers, the obligation for the presence of the energy label on manufacturers’ websites is not clearly stated. It could be argued that the content of the suppliers’ websites is not considered as “visual advertisement” or “technical promotional material” as defined

in Article 3e and 3f because both would involve some act of active promotion. To ensure that the Energy Label is presented consistently next to the products, we suggest to adapt the text as follows:

(e) any visual advertisement for a specific model of a refrigerating appliance with a direct sales function, including on the Internet contains the energy efficiency class and the range of efficiency classes available on the label in accordance with Annexes VII and VIII

(f) Any ~~technical promotional~~ material concerning a specific model of a refrigerating appliance with a direct sales function, including on the Internet, which describes its specific technical parameters includes the energy efficiency class of that model and the range of efficiency classes available on the label, in accordance with Annexes VII and VIII.

Trade fairs

In the B2B market, large sales volumes are generated during trade fairs. These events are not considered as a traditional “points of sale” and many appliances are not labelled during these events. We would like to ensure that labelling is also mandatory at trade fairs and suggest introducing the following text:

EL new Article 3i:

Each refrigerating appliance with a direct sales function, at the point of sale (including trade fairs), bears the label provided by suppliers in accordance with point 1(a) of Article 3, with the label displayed in such a way as to be clearly visible.

EL Article 4a:

Each refrigerating appliance with a direct sales function, at the point of sale (including trade fairs), bears the label provided by suppliers in accordance with point 1(a) of Article 3, with the label displayed in such a way as to be clearly visible.

Reinforce provisions on refrigerants

The commercial refrigeration sector is a key HFC consuming sector and a large number of low GWP options exist. There is a lack of awareness among retailers regarding the impact of the EU F-Gas Regulation’s phase-down of HFCs and over-reliance on the equipment ban which prohibits the use of HFCs in systems over 40kw from 2022. While this ban has the potential to act as a useful market signal, its late date (one year after the 55% supply cut) means that many retailers have been lulled into a false sense security that the F-Gas Regulation will not impact them until 2022.

For these reasons, we urge decision-makers to support the implementation of the F-gas Regulation by:

- Introducing a malus for refrigerants with a GWP more than 150 from entry into force of the Ecodesign Regulation to steer the market towards the use of refrigerants with reduced harmful impact on the environment.
- Since by Tier 2 (1 January 2023), refrigerants with a GWP more than 150 will have been phased out, the malus could then apply to refrigerants with a GWP 4 and above in a proportionate manner.

Reinforce provisions on repair and end-of-life aspects

We support the requirements made to facilitate the disassembly and repair of refrigerators with a direct sales function made in the current draft. We believe that some of the provisions can be taken a

step further and be in line with the ambition of the requirements set forth in the draft for washing machines and dishwashers.

▪ **Target non-destructive ease of disassembly, not only ease of dismantling**

The provision on disassembly (Annex II, 2b) should be taken to the next level by allowing replacement of key components for repair and not removal as proposed. Provision 2d should not be limited to door gaskets and light sources but encompass an exhaustive list of components as proposed below.

Annex II, 2d: *manufacturers shall ensure that if a refrigerating appliance with a direct sales function ~~contains door gaskets and light sources,~~ are designed so that the following parts ~~these shall be~~ are replaceable without special tools and without permanent damage (...)*

- Thermostats / thermistors / temperature sensors
- Starting relays
- No-frost heating resistors
- Electronic processors (PCBs)
- Compressors
- Interior elements (drawers, baskets and shelves)
- Knobs, Dials & Buttons
- Refrigerant gas tubes
- Door seals/gaskets
- Door hinges
- Light sources
- (...)

New point (2f) Manufacturers shall freely document the sequence of operations needed to access the parts listed above, including for each of these operations the type and the number of fastening techniques(s) to be unlocked, and tool(s) required.

▪ **Strengthen the availability of spare parts provision**

We urge Member States to introduce ambitious provisions on spare parts availability as described below:

- all spare parts should be available during at least 10 years, in line with the Austrian standard ONR 192102.
- spare parts access should be granted to retailers, repairers and end-users.
- the list of spare parts should be extended to include the list of parts specified in the previous point. We believe that the current formulation which mentions only three types of parts diminishes the chances of this requirement being properly enforced.
- A maximum delivery time of **one week** for spare parts should also be introduced.

▪ **Introducing a requirement on access to repair and maintenance information**

In a [recent study](#), the most commonly cited reason for an unsuccessful repair was the lack of information; this was the cause for one out of three failed repairs (32%). Therefore, a clause on “Access to repair and maintenance information” should be included, as was done in the proposed Ecodesign Regulations for washing machines and dishwashers.

Other points

- The label also has an informative function and should help consumers understand the difference between products. **The climate class should be shown on the label** to explain the differences in

energy consumption, as was done in the professional refrigeration case, **as well as the temperature class.**

- Refrigerated drum vending machines have been taken out of the scope without clear explanation. To ensure their inclusion in the next regulation, we urge Member States to cover them at least with information requirements and mention them in the review clause.
- The **review clause** (Ecodesign Article 8) should include, among other things, the following points:
 - Assess the opportunity to expand the regulation scope to built-in cabinets, vertical static-air refrigerated cabinets, saladettes and chilled horizontal serve-over counters with integrated chilled storage.
 - Assess the opportunity to simplify the EEI formula by introducing different MEPS levels per technology.
 - Assess the possibility to include instructions on testing of product series.
For commercial refrigerated display cabinets, each model is typically available in up to several hundred configurations. While some of the configurations have an impact on energy, testing all configurations separately could overstrain laboratory capabilities of manufacturers and Market Surveillance Authorities. The Commission could provide guidelines for the testing of the least-performing configuration and extrapolation methods to calculate all possible configurations.
 - Assess whether the total display area (TDA) parameter used to calculate the EEI leads to a bigger glass surface.
- Newly introduced **definitions** should be adapted as follows:

“Custom-made refrigerating appliance” can be mistaken for one of the many uncommon appliance configurations. We urge decision-makers to fine-tune the text as follows: *custom-made refrigerating appliance with a direct sales function made on a one-off basis, not to be mistaken with configurations as described in Annex II 3b, (...)*

“Built-in appliances encased by panels”: built-in appliances are not part of the scope of the draft regulation including cabinets that are “to be installed in cabinetry or encased (top, bottom and sides) by panels”. We believe that appliances that are encased in panels could be used as a loophole where a normal appliance is put on the market but is out of scope because it has (decorative) panels around it. We call for the removal of encased built-in appliances from the scope exemptions. [EC Art. 2.17(a), EL Art. 2.18(a)]

The exemption for “food-processing” appliances should not apply to appliances with one compartment specifically designed for carrying out food processing which is equivalent to less than 20% of the net volume.

The definition for “refrigerating appliances with a direct sales function that have no integrated system for producing cooling and function by ducting chilled air that is produced by an external air chiller unit” should be made much clearer. It should be made clear that the “external air chiller unit” is part of the refrigerating appliances and not a remote component; otherwise it could lead to conflicts with the specific inclusion of remote cabinets with a direct sales function into the scope of the regulation. [EC & EL Art. 1.2(m)]

With regards to “refrigerated vending machine”, there are on the market refrigerating vending machines that have an additional hot beverage functionality. These products are not covered by the measurement method for vending machines. The definition should be adapted as follows: “vending machines with an additional function such as hot beverages are not included”. [EC Art. 2.25, EL Art. 2.15]

Low-noise appliances are now defined as refrigerating appliances with noise power emission lower than 23 dB(A) instead of previously 20 dB(A); all low-noise appliances are excluded from the scope. In the draft for the revision of EC No 643/2009 for household refrigeration, low-noise appliances are defined as appliances with noise power emission lower than 20 dB(A), where low-noise appliances between 10 l and 60 l are included in the scope. We ask for the dB(A) limit to be set back to 20 in order to maintain congruence of definitions within regulations covering refrigerator and freezer appliances and to prevent gaps in the scope. [EC Art. 2.30, EL Art. 2.30]

- **Benchmark values** should be updated as below:

	TDA (m ²), net volume (l) or gross volume (l) as applicable	Net volume (L- litres) Gross volume (for beverage coolers) (L-litres) (when applicable)	T1 or TV	AE (kWh/yr)
Supermarket cabinets (Vertical refrigerator)	3.3			4526 (= 12.4 kWh/day)
Supermarket cabinets (Horizontal refrigerator)	2.2			2044 (=5.6 kWh/day)
Supermarket cabinets (Vertical freezer)	3			9709 (=26.6 kWh/day)
Supermarket cabinets (Horizontal freezer)	1.4 or 2.76			1621 (= 4.4 kWh/day) or 6424 (=17.6 kWh/day)
Can and bottle machine		548	7 °C	1547 (= 4.24 kWh/day)
Spiral refrigerated vending machine		472	3 °C	2070 (= 5,67 kWh/day in ready mode)
Beverage cooler	-	506		475 (= 1.3 kWh/day)
Ice-cream freezer	-	302		329 (= 0.9 kWh/day)
Gelato-scooping cabinet	1.43	-		10862 (= 29.76 kWh/day)

Contact:

ECOS – European Environmental Citizens’ Organisation for Standardisation
Chloé Fayole, chloe.fayole@ecostandard.org

Annex - Case Study Ice-Cream Freezers

Results of EEI calculations for static freezers for pre-packed ice-cream according to the current draft differ from the previous draft due to the following factors: a new **test standard** (EN 16901), new **M value, equivalent volume** instead of net volume (including factors **for temperature and climate classes**) and factor P for **non-remote appliances**.

Topten has analysed the differences in EEI between current and previous formula, taking into account the different test standards.

Model	EN ISO 23953-2, previous draft EEI formula	EN 16901, previous draft EEI formula	EN 16901, current draft EEI formula	Difference previous and current draft EEI formula (%)
C1, CC_B for ICFT	63.3 (E)	39 (D)	23 (C)	- 41%
C1, CC_B for ICFT	51.1 (E)	29 (C)	18.7 (B)	- 36%
C1, CC_B for ICFT	73 (F)	46.9 (D)	27.2 (C)	- 42%
C1, CC_B for ICFT	57.2 (E)	42.1 (D)	27.9 (C)	- 34%
C1, CC_B for ICFS	47.5 (D)	33.2 (C)	20.2 (C)	- 39%
C1, CC_B for ICFS	39.8 (D)	26.5 (C)	17.8 (B)	- 32%

The elimination of the door opening sequence in EN 16901 has led to **“upgrades” by at least one energy class**. Instead of balancing this effect, the raised M value and correction factors of the new draft **decrease the EEI values by another 30-40%**, resulting in a yet higher energy class. For CC_C models this effect will be even stronger.