



Air conditioners, comfort fans and local space heaters

**ECOS-EEB-Coolproducts comments following the
Ecodesign and Energy Labelling Consultation Forum 7th
March 2023**

Brussels, April 2023

Summary

This document contains the written comments from ECOS-EEB-Coolproducts following the Consultation Forum from March 7th, 2023, where the newest draft of the ecodesign requirements for air-to-air air conditioners and comfort fans, and energy labelling for air-to-air air conditioners, comfort fans and local space heaters were discussed.

We welcome the direction the Regulation (EU) No 206/2012 is taking and the improvements made in line with our past comments. We value that the revision of Ecodesign requirements for air conditioners and comfort fans goes hand-in-hand with the revision of Energy Labelling regulations and therefore is drafted in a way to allow for comparability between room appliances with the same function. We also welcome that ecodesign requirements for comfort fans are now based on the maximum airflow as compared to the diameter of the fan, and that the proposed MEPS have been adjusted to avoid environmental dumping from markets outside the EU.

Regarding the options for the Energy Labelling, we support Option 3b – the merge label for all the heating appliances and a combined label for cooling appliances and for all the comfort fans – the option with most impact. When defining the class limits A through G, we ask to maintain an empty class A at the time of enforcement (January 2026), as aimed for by the Energy Labelling framework.

General comments

During the meeting, edits to the ecodesign regulation working documents, as well as new information relating to the discussed energy labelling regulation were presented. The fact that stakeholders were only notified of these changes at the meeting, as opposed to ahead of the meeting through background documents, was not ideal. This rendered parts of our preparatory work redundant and did not give us a realistic chance to have an informed exchange of opinion at the meeting. For the future, we encourage the Commission to send out information about what is going to be discussed at the meeting well in advance.

No new draft version of the Energy Labelling regulation was presented before or after the Consultation Forum. Therefore, the comments here will be high-level and based on the Powerpoint presentation shown at the Consultation Forum.

Below we categorise our written feedback into the sections Ecodesign for air-conditioners and Ecodesign for comfort fans, which both relate to the same Ecodesign working document, Merged Energy Labels for local space heaters, air conditioners and comfort fans which relates to the Energy Labelling, and Additional comments. We also added a few considerations on the presentation of the work on critical raw materials.

Ecodesign for air-conditioners

MEPS for the full scope

We welcome that a specific set of minimum efficiency requirements (MEPS) now equally apply to (reversible) heat pumps and (reversible) air conditioners. The MEPS are based on the seasonal space heating/cooling energy efficiency value SCOP/SEER. Previously, it was omitted that heat

pumps, primarily intended for heating, and air-conditioners, primarily intended for cooling, can commonly function also in reverse. The proposed regulation provides clear definitions for these appliances and their functions. It also introduces minimum heating efficiency requirements for reversible air conditioners, closing a gap that existed in the current regulation, which we warmly welcome.

Stricter MEPS for air conditioners and heat pumps

The proposed MEPS are reasonable when viewed in relation to the benchmarks of best available technology on the market today (Draft Ecodesign regulation, ANNEX V Benchmarks, p. 62). However, the regulation will enter into force at the start of 2026 which is three years from today, and will then stay valid for another 5-10 years before it is reviewed again. Given the trajectory of efficiency gains over the past decade – comparing BAT benchmarks from (EU) No 206/2012 and the current draft regulation – as well as the ingenuity of the industry we propose to tighten the MEPS by 10% – for fixed double duct and others (split, etc). See table 1 below.

Table 1 - Proposed stricter MEPS

Minimum SEER	The value of SEER shall not be less than	
	Draft Regulation	ECOS proposal
Single duct air-to-air air conditioners	1.9	1.9
Portable double duct air-to-air air conditioners	1.9	1.9
Fixed double duct air-to-air air conditioners	3.3	3.6
Other air-to-air air conditioners	6.0	6.6

Minimum SCOP	The value of SCOP shall not be less than	
	Draft Regulation	ECOS proposal
Fixed double duct air-to-air heat pumps	2.5	2.8
Other air-to-air heat pumps	4.0	4.4

Calculation of Energy Efficiency Index

The current Ecodesign regulation No 206/2012 uses the efficiency metrics SEER and SCOP. The revised regulation relies on the metric η (%) as a uniform metric across all room heating/cooling appliances. This metric is based on the SEER/SCOP value and two correction factors: the control correction factor (F_{corr}) and the conversion coefficient (CC).

The current draft regulation from March 2023 sets conversion coefficient at 1,9. The Energy Labelling draft regulation presented in June 2022 set the conversion coefficient at 2,1. The coefficient is subject to change. The timing of change is independent from the timings for RACs/Room Heat Pumps. Rather, it aims to reflect the share of renewables in the primary energy mix.

We ask that the energy labelling or the ecodesign regulation or a supplementing document includes a paragraph on how to deal with changing parameter Conversion Coefficient during the time both regulations are into force. The Conversion Coefficient is part of the EEI formula and directly impacts the efficiency value η (%).

Particularly, we ask the Commission to clarify the following:

- Will the manufacturers/dealers/points of sales have to re-calculate η and consequently re-label and re-declare their products every time that CC changes? How does this process work?

Likely, the coefficient will already change during the first year that the revised regulations enter into force in 2026:

- The revised EL and ED regulations will be valid from 2026 till about 2031.
- The Conversion Coefficient (currently CC = 1.9) is valid from 2023 till 2026.

Product Information Sheet

The product information sheet should always contain the energy efficiency index (here: η) of the products as well as all information necessary to calculate the energy efficiency index for all product types. With that in mind, we welcome the level of detail for the proposed product information sheets, including the GWP of the refrigerant used and listing the “controls delivered with the product” that determine the control correction factor Fcorr (Ecodesign draft, Annex II, Tables 7-10, pp. 27-31). We ask to include the Fcorr value in Table 8 (p.28). Table 7 (p. 27) includes a field for the Fcorr value. Table 8, likely by mistake, currently does not.

Refrigerants

In our view, ecodesign and energy labelling should be used as a complementary measure to the F-Gas regulation to bring down the use of fluorinated greenhouse gases. A malus scheme for mid and high GWP refrigerants should be introduced on the energy efficiency index, giving further incentives for consumers to purchase products with lower climate impact, and for manufacturers to produce and market them. The technology to utilise natural refrigerants, such as R290 propane, R717 ammonia, and CO₂, is available. Manufacturers already offer products using these refrigerants (see Coolproducts 2022).

Ecodesign for comfort fans

We strongly welcome the MEPS for comfort fans and the Energy Label. This means that the consumers will now be buying more efficient comfort fans.

Service Value (SV) based on Airflow

We strongly welcome the change from making the minimum SV dependant on the diameter towards a function of the SV of the airflow. This means that SV can be used for all types of fans, even tower fans which do not have a diameter to work with. In addition, the airflow is not only influenced by the diameter of a fan, it depends also on other factors such as RPM (the spin-speed of the fan, rounds per minute) as well as the power input, design of the blades, etc.

The downside of this is, that in the beginning it will be difficult to compare the products with MEPS from other countries (which are still based on diameter) and consumers will have to get an understanding of what is their desired airflow.

MEPS for the full scope, including all types of comfort fans

We welcome that also tower fans and fans with a diameter of less than 20 cm are now subject to MEPS. There are 4 different MEPS for fans proposed in the new draft. A general one (namely for

pedestal, floor and table fans) with a distinction made on airflow ($F < 80$ and a slightly less strict one for $F > 80$) as well as a specific one each for ceiling fans and tower fans (the latter has a fixed value for SV). These MEPS are more ambitious and can mostly compare to Chinese MEPS, or are even stricter. With these specific MEPS in place, environmental dumping will be difficult from China to the European Market, which is currently still the case. We welcome that the MEPS for tower fans are actually more ambitious than Chinese MEPS. Data shows, that it is possible to achieve these requirements, there are efficient models on the market already today. This level of ambition should serve as a great example for all comfort fan types.

No separate weaker MEPS for “other” fans with an Airflow > 80 .

The newly presented distinguished MEPS for the fan type “others” such as pedestal, table, floor standing fans, has a separate slightly weaker formula for Airflow $F > 80$. This is not supported as it makes the MEPS unnecessarily complicated. There are still enough models on the market that fulfil the general, slightly stricter MEPS (now only foreseen for $F < 80$).

Requirements on low power modes

We welcome that now also comfort fans have requirements for standby mode, following the horizontal regulation on standby and networked standby modes. This will help to unlock the improvement potential by achieving lower power consumption in low power modes.

Include requirements on SV in partial load

We recommend including requirements on SV also in partial load. It should be noted that most air conditioners can be run on different speeds. The measuring standard would also allow measurements for minimum settings. We do understand this would mean a more complex label, with a combination of full and partial load, twice the effort for measuring, but it would reflect better the real-world use of fans (most of the time, the fan does not run on full speed).

Merged Energy Labels for local space heaters, air conditioners and comfort fans

An additional consumer study has been presented in the last Consultation Forum showing, once again, that energy efficiency will be the main driver of sales if the energy labels of multiple products will be merged, namely for room air conditioners, electric joule and gas, oil and solid fuel heaters.

It is of utmost importance to include **electric heaters** in the scope of the energy labelling since they represent a huge share of volume sales for this product lot, and they are currently not regulated within this policy measure.

Low-GWP icons

We welcome that the consumer study assessed icons that can guide consumers to products with a low-GWP refrigerant. Using Ecodesign and Energy Labelling as a compliment to the EU F-gas regulation is something we have long called for. The study showed that an icon to distinguish products with a low-GWP refrigerant helps guide consumers towards these products and thus pulling the market towards more climate-friendly refrigerants. We recommend introducing these

icons for products with a refrigerant with GWP < 5. As refrigerants with higher GWP (i.e. 150) are already the standard and will be more and more common, we recommend reserving this icon for products of ultra-low GWP.

PM emission measurements

PM emissions in the energy label should be aligned with the Norwegian method to measure them, because it includes the full cycle (both full load and part load) of operations, including particles that condense when the flue gas meets the air, and with a realistic filling of the combustion chamber. This would be the preferred choice rather than the current EM-PME which does not provide a clear picture of real-life operations.

Assessed policy options for merged label

Among the various policy scenarios evaluated, ECOS strongly supports the **option 3b**. It will clearly result in the highest energy and GHG savings, while having a stable trend for expenditure savings, ultimately steering the sales for the most energy efficient products among different categories. The widest merge will fully assist consumers to make an educated purchase.

Energy class thresholds

ECOS is not in favour of the additional granularity provided in the new label: fossil fuel appliances will have a better energy class than the prior intention of the merge, it could jeopardise the effort for the heating decarbonization towards energy and climate targets. However, although less ambitious than the previous merge and to build on the wider newly consensus among Member States, **ECOS welcomes the new thresholds of the energy classes**, provided that we would be sceptical of the lower D-class threshold allowing base case for gas and oil heaters to be in this class, thus ECOS recommends raising the lower threshold from 83% to 85%.

Additional comments

Critical raw materials

We welcome the intention of the Commission to launch a study on ecodesign measures for critical and scarce raw materials. This would complement the recent proposal to set a EU Critical Raw Materials regulation, which unfortunately lacks strong measures and targets on resource efficiency. Among the types of requirements that will be analysed, we recommend including disassembly and repairability aspects that we aim at extending the life of CRM-containing products.

Editorial comments

Doc	Page	Text	Comment
Ecodesign regulation (Draft) Annex I, Definitions for air-to-air air conditioners and heat pumps	Page 13	Footnote 12 does not link to any place in the main text	Probably, the footnote 12 links to Definition No. 31

Ecodesign regulation (Draft) Annex II, Product Information Sheet	Page 28	Table 7 (p. 27) includes a field for the Fcorr value. Table 8, likely by mistake, currently does not.	<u>We ask to include the Fcorr value also in Table 8 (p.28).</u>
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Table 1 – Editorial comments

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