



Brussels, 18 October 2019

Tumble driers: Position on the ecodesign & energy labelling proposals

Following the Consultation Forum meeting that took place on 18 September 2019 to discuss the revision of the Ecodesign and Energy Labelling Regulations on tumble driers we call upon the European Commission to take the present paper into consideration.

In the context of a climate emergency, it should also be noted that compared to other products in the ecodesign working plan, tumble driers can be considered as non-essential or luxury appliances. Nevertheless, driers were responsible for an estimated 6.5 million tons of CO₂-eq of emissions in 2017, equivalent to the emissions from all of Hungary's cars. With this in mind, we hope the Commission will not hesitate in setting ambitious requirements for this product group.

Energy efficiency aspects

Earlier adoption of the ecodesign requirements in 2022

Regrettably, the revised ecodesign requirements are delayed until 2024 while the proposal for the entry into force of the revised Energy Labelling Regulation is set for 2022. This means that there would be no improvement over the course of nine years, given that the current ecodesign requirements entered into force in 2015, even though the preparatory study acknowledges that there still is potential for such improvement.

We call on the European Commission to reconsider the date and **to align the entry into force of both revised regulations for 2022.**

Set more stringent energy efficiency requirements – support shifting to heat pump technology

We strongly support the proposal to shift towards heat pump driers in order to provide sufficient incentive and visibility to the market. This revision shall be taken as the opportunity to bring the EU more closely in line with other economies and aim for a change towards the most efficient tumble driers.

The review study shows that the heat pump tumble drier always outperforms the other type of driers. In 2016, heat pump tumble driers accounted for 52% of all sales and in just 6 years the market share went up from 9% to 52% (see figure 1).

Furthermore, it was concluded that the design option 8 (improved energy efficiency of condenser driers by changing heating technology to heat pump for condenser driers) was by far the design option

presenting the largest potential environmental benefits in terms of total energy and GWP, and the only design option presenting net life cycle cost savings for the consumer (i.e. represents the LLCC)¹.

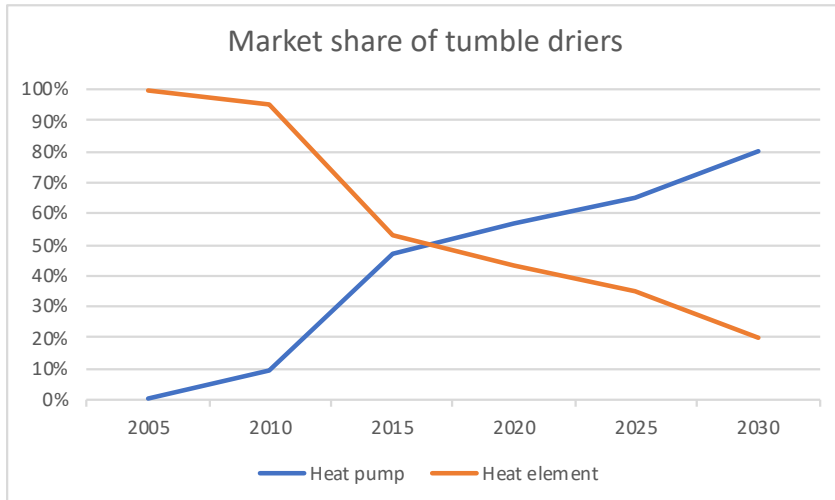


Figure 1: Market shares of heat element and heap pump tumble driers

In Switzerland, only heat pump tumble driers are allowed on the market, where the dominant share is class A++ which is actually decreasing in favour of class A+++ (see Figure 2).

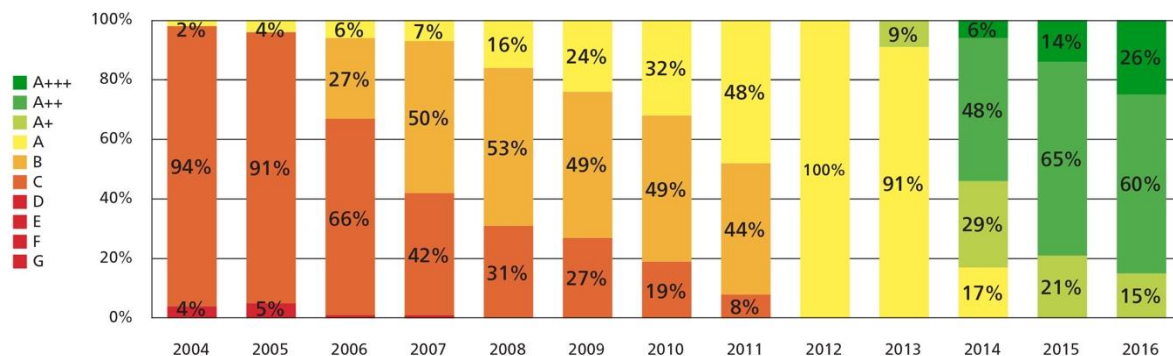


Figure 2: Tumble drier market shares according to the energy classes in Switzerland

The proposal, however, only includes one tier of energy efficiency requirements, and at an unambitious level, i.e. at EEI of 96, the proposed future class E. Therefore, it is our opinion that an **energy efficiency requirement of an EEI not higher than 80 as from 2022 is necessary and feasible**. The least efficient heat pump models already present on the market today can achieve an EEI of 80, and the market trend for heat element tumble driers shows a clear decrease. Such stricter energy efficiency index will also ensure that there is no backsliding. A limit of EEI of 96, on the contrary, could push manufacturers to worsen the performance of their heat pump appliances to merely reach the lower limit.

Tighten the functional requirements - tier 2 needed

For condenser tumble driers, the proposal only includes one tier of functional requirements, and at an unambitious level, i.e. a weighted condensation efficiency of 80%, current and future class C. Given that under the proposed energy efficiency requirements most heating elements driers will be out of

¹ Tumble driers review preparatory study p. 223

the market, and that the condensation efficiency of condensation driers is generally much higher, we believe that an increased condensation efficiency requirement is feasible and necessary.

We believe that with a more ambitious condensation efficiency requirements through a two tier approach we can further stimulate the products to better performances, with **tier 1 setting a weighted condensation efficiency not lower than at 80% in 2022, and a tier 2 in 2024 setting a weighted condensation efficiency not lower than at 90%.**

Redefine the energy efficiency classes

Following the proposal in the working documents, classes F and G will already be empty by 2024 when the ecodesign requirement of EEI 96 enters into force. What is more, the proposed energy classes have very varying bandwidths, from 52 for class F to 13 for class B. Such class widths, especially in the top classes, jeopardise the possibility of the labels to last for at least 10 years, and makes it too easy to jump one class up through limited product adjustment or using the tolerances. Thus, we are convinced that **the energy efficiency classes need to be revisited as follows:**

- Further **spread all the energy classes** on the label to avoid greying out classes when the new requirements enter into force. The optimisation of the use of all the classes in the label translates into a clearer product differentiation. Furthermore, there is still room for improvement in the technology amongst tumble driers and we deem it important for the label to reflect such opportunity for improvement – note that a current A+++ tumble drier consumes 43% less energy than an A+!
- **Class G** should accommodate the **energy efficiency limit, i.e. EEI 80.**
- **Class A** shall be **empty** at the entry into force of the revised requirements following the Energy Labelling Regulation.
- BAT should be placed in class B, ideally closer to the class B and C limit.
- For consistency and transparency reasons, we recommend a more balanced scale with a **more even bandwidth** of classes.

Low power modes to be regulated in the horizontal regulation

While we agree with the principle of setting absolute values for the consumption in the low power modes and removing them from the formula, **we disagree with the decision made to tackle the off, standby and networked standby consumption in this regulation and not in the horizontal standby and network standby regulation.** Choosing the vertical approach increases difficulties for regulation updates and undermines the level playing field.

It is our view that it would be more beneficial to keep these definitions and requirements for the off, standby and networked standby modes in the horizontal regulation. The vertical regulation could instead potentially include a more precise rule for the power management (e.g. “after the completion of a cycle, a machine shall go to an off mode (as defined in Commission Regulation (EU) No 801/2013) after a maximum of 15 minutes”). This would significantly limit the energy impact of the left-on mode.

Support to non-deceptive programme names: no “Eco” programme

In our view, the test method used for the declaration of conformity with ecodesign and the energy label should be as representative of real-life use as possible, hence the appropriate scenario would include testing different programmes or a combination of programmes and functions, selected on the

basis of consumer habits (use frequency: cotton normal dry 25% times, synthetics normal dry 17%, etc.).

Were the Ecodesign and Energy Label Regulations only refer to one programme, it should refer to one of the most popular programmes. We believe that the declaration should at the very least **refer to the standard/normal/regular programme (and call it such)**, as proposed in the working documents. In addition, we call for **restricting the use of other programme names such as normal/daily/regular**, which can divert the user from choosing the programme in which performance was tested. Considering the risk of abuse on the market, it is essential that the energy label continues to provide consumers with clear and honest information.

We strongly question the proposals to name this programme “Eco” instead, as raised by some stakeholders at the Consultation Forum. The fact that the washing machine regulation uses such a name is not a solid enough justification. There are fundamental differences between tumble driers and washing machines. Calling the programme “standard cotton” or “normal” would ensure more users select this programme instinctively, and we are convinced that the name “Eco” should be used for the most efficient programme only, to avoid confusion.

Extend the review clause

We propose that Article 8 for the review of the regulation also assesses the following aspects:

- the feasibility and appropriateness of new requirements for reducing **microplastics** in the water outlet, as it has been the case within the revised regulation on washing machines.

For Europe, the estimated range for microplastics generated from the washing and tumble drying of synthetic clothing is 18,430—46,175 tonnes per year², the third most important source of primary microplastics. The establishment of a method for the measurement of the quantities of microplastics released from the washing and tumble drying of synthetic clothing is a necessary step to set regulatory limits and requirements to mitigate these emissions. Such requirements could include, among other things, microplastics and fibre release prevention at source through filters.

- the **evolution of new products in the market**, such as air dressers, to assess the need to revise the scope.
- the indirect impact of tumble driers on textiles might also be considered in the future. Beyond their energy consumption, there is broader consideration that tumble drying can considerably shorten the lifetime of garments. While the UN estimate the garment sector is responsible for between 8 to 10% of global emissions, in the context of the development of a European sectoral policy to address the environmental impacts of the textile sector, the impact of drying on clothing could be explored in the next review study.

Standardisation request needed

We urge the European Commission to publish the Standardisation Request for the ESOs to develop test methods that will eventually become harmonised standards supporting the revised Ecodesign and

² ICF & Eunomia report for European Commission on investigating options for reducing releases in the aquatic environment of microplastics from (but not intentionally added to products https://ec.europa.eu/environment/marine/good-environmental-status/descriptor-10/pdf/microplastics_final_report_v5_full.pdf)

Energy Labelling Regulations on tumble driers. We advocate for having **one single standardisation request comprising both performance and resource efficiency aspects.**

Show more comprehensive benchmarks

While the current regulation shows values for appliances in a range of capacities from 3 to 8 kg, the working document only shows data for 7 kg machines.

In addition, according to our market research we have a proposal of a new benchmark³:

Condenser heat pump household tumble drier with a rated capacity of 7 kg:

- (a) energy consumption: 0.86 kWh/cycle for the standard cotton cycle
- (b) cycle time: 126 minutes for the standard cotton cycle
- (c) airborne acoustical noise emissions: 62 dB(A)

Material efficiency aspects

Reinforce requirements on resource efficiency

Circular economy, resource savings and savings on embedded energy and CO₂ are clear priorities for the EU. They have been assessed necessary to reach our climate goals as set in the EU Long-term Decarbonisation Strategy for 2050. We therefore call on the European Commission and Member States to take ambitious action through the ecodesign policy.

Furthermore, as rightly presented in the review study, **the lifetime for large household appliances has declined, and the highest reduction in lifetime was observed for freezers and tumble driers, where it decreased from 13.6 to 11.9 years. Such a decline in a product's service time needs to be reversed.**

A way to improve the lifetime of household appliances is to design products that are easier and less costly to repair so that it is more affordable for consumers to repair appliances than to replace them. We therefore recommend the adoption of robust resource efficiency requirements.

Strengthen provisions on spare parts

Availability of spare parts is a key material efficiency consideration, and therefore we urge the Commission to introduce ambitious provisions on spare parts availability as described below:

- all spare parts should be available at least **during the average product lifetime, i.e. 12 years** after the last unit is supplied.
- **The list of spare parts should be similar to the list included in the washing machines regulation⁴.** Additionally, the list of spare parts should be **extended** to also include other commonly failing spare parts:

³ Link to product: <https://www.vzug.com/ch/de/product/ch-Catalog/1201300004#configuration>

⁴ List of spare part in the revised regulation for washing machines: motor and motor brushes; transmission between motor and drum; pumps; shock absorbers and springs; washing drum, drum spider and related ball bearings (separately or bundled); heaters and heating elements, including heat pumps (separately or bundled); piping and related equipment including all hoses, valves, filters and aquastops (separately or bundled); printed circuit boards; electronic displays; pressure switches; thermostats and sensors; and firmware including reset software.

- strap/belts,
 - power cables,
 - capacitors,
 - suction nozzles,
 - rollers,
 - dust bag holders,
 - tensioners,
 - wheels,
 - gliders,
 - evaporators,
 - door latches,
 - condensers,
 - fittings,
 - refrigerants.
- Apart from circuits containing refrigerant gases, **access to spare parts should not be restricted to professional repairers but should also be open to end users**. This is because certain maintenance and repair operations can be carried out with little technical ability.

In general, greater clarity is needed on how professional repairers are defined. It is crucial for such a registry not to be defined in a way that would exclude credible repair actors (e.g. independent repairers, repair cafes, and social enterprises). We call on European decision-makers to remove barriers to repair, by giving access to repair information and spare parts to all types of repairers. This could be done by directly including repair information, fault diagnosis functions and spare parts references into the printed circuit boards and the user guide. The repair market must not be distorted through unnecessary restrictions of the availability of information and spare parts. Should it be decided to maintain the concept of professional repairers, we request that Member States set up the proposed official registration systems before the repair requirements enter into force. The maximum information that manufacturers or national registers can require from repairers should be defined in order to ensure that there are no disproportionate barriers to access such a status:

- **Technical competence:** It should be specified that a self-declaration from the repairer stating that they have the technical competence to carry out the repair is sufficient. Further, optional information can be requested from the repairer to i) state their compliance with the applicable regulations for repairers of electrical equipment in the Member States where they operate, and ii) to provide reference to their professional repairer registration in an official system, where such system exists in the Member States concerned, not being referred to in these systems (which could be the case for repairers working exclusively with waste or donations) shall not prevent the recognition of the repairer as professional.
- **Liability insurance:** It should be specified that a self-declaration from the repairer which states that they have appropriate insurance to cover liabilities resulting from their activity regardless of whether this is required by the Member State is sufficient.

It is also important to clarify the basis upon which national registries, manufacturers, importers or authorised representatives can accept or refuse registration.

- A maximum delivery time of **one week** for spare parts should also be introduced.

Target disassembly, not only ease of dismantling

Regulations should set requirements for ease of non-destructive disassembly, not only ease of dismantling, as this is a big step backwards in terms of reparability of products. **We call on EU decision-makers to respect the waste hierarchy and to facilitate repair through a simpler design.**

The revised Ecodesign Regulation for tumble driers should contain more ambitious requirements on design for dismantling, recycling and recovery. We propose the following text be included:

“For tumble driers equipped with a heat pump, manufacturers, importers or authorised representatives shall ensure that the materials and components referred to in Annex VII to Directive 2012/19/EU, in particular the heat pump (where oil and refrigerants are located), are easily accessible and can be removed with the use of commonly available tools in order to ensure the maintenance and servicing of the heat pump as well as the verification of leaks.

Manufacturers, importers or their authorised representatives shall ensure that joining, fastening or sealing techniques do not prevent the removal, using commonly available tools, of the components indicated in point 1 of Annex VII of Directive 2012/19/EU on WEEE.

Manufacturers, importers or their authorised representatives shall, without prejudice to point 1 Article 15 of Directive 2012/19/EU, make available the dismantling information needed to access, any of the products components referred to in point 1 of Annex VII of Directive 2012/19/EU on a free-access website.

This dismantling information shall include the sequence of dismantling steps, tools or technologies needed to access the targeted components.

The end of life information shall be available until at least 12 years after the placing on the market of the last unit of a product model.”

Requirements for easy maintenance

We suggest to add a requirement for the **appliances to signal when the filters of the machine should be cleaned**. The proper maintenance of the machine guarantees that its and energy efficiency performance are maintained, and it lowers the risks of a premature breakdown, thus influencing the lifetime of the appliance.

It is also crucial to **provide guidance on how to properly clean the filter** in order to minimise microplastic release (i.e. avoid re-spreading the captured microfibres by not cleaning the filter under running tap before removing the dry lint).

Restrict halogenated flame retardants

Chemical substances in electronics, due to a continuing overuse of plastics and the inherent use of chemicals in product production processes, have an important role to play in the material efficiency profile of any given product. Many of these substances are hazardous, having negative environmental and human health impacts, and also creating a barrier to circularity due to the presence of unwanted substances in the resulting recyclates. The Ecodesign Directive needs to develop a chemicals management approach that considers hazard profiles of substances, and translate these into product requirements, linked to REACH and ROHS processes as a minimum but also building on that work to provide ambitious requirements driving design and material innovation.

Material efficiency efforts in electronic displays rightfully restricted halogenated flame retardants, an important requirement from a material perspective because **non-essential flame retardants prevent a clean circular economy** and hazardous substances in recycled materials not only exposes the public and the environment to these toxic substances, but also destroys the public’s trust in recycled materials. Tumble driers should have the same restriction requirement.

As demonstrated by the recently revised Ecodesign Regulation for electronic displays, supporting design-based solutions for improved performance and recyclability of materials, also presents the opportunity to prevent hazardous chemicals from reaching the market, namely halogenated flame retardants.

Restricting the use of halogenated flame retardants from the largest components of tumble driers (e.g. panels, door, controls and lint screens/filters) will both increase consumer safety and remove barriers to material recycling. Moreover, this will also help eliminate the need for and risks posed by other non-halogenated flame retardants in future. Exclusion of all flame retardants in these parts should therefore also be considered as this would avoid non-essential use of these problematic chemicals, and would help drive innovation for design-based circularity in products more effectively, again supporting circularity of materials used in tumble driers.

Product marking should also be considered as a complimentary tool to prevent regrettable substitution and use of alternatives not assessed as perfectly safe such as organophosphate flame retardants⁵. The marking of products containing any type of flame retardants should be required to ensure traceability of substances and their identification in reuse, remanufacturing and recycling activities, allowing exclusion of these parts from re-entering the economy through circular activities.

As has been demonstrated in the case of displays, ecodesign regulation is highly suited and effective at introducing a restriction on groups of substances that pose a risk to the environment and civil society, as well as consumer confidence. By adopting an ecodesign-based approach to this issue, display and tumble drier manufacturers [and possibly others in future] will be able to build their business upon a fire safety strategy which is innovative, more sustainable, and free of hazardous substances.

Reduce barriers to the uptake of low-GWP refrigerants

It has been established by the review study that the heat pump technology is taking over the market and this will lead to a large quantity of refrigerants with high GWPs to be put on the market. In addition, **the F-gas Regulation does not explicitly mention tumble driers** in its scope. Heat pump driers which deploy the lowest GWP refrigerants available are available on the market today (e.g. Siemens iq700 using R290/propane). We strongly believe that ecodesign is essential to complement the F-gas Regulation as well as to provide a clear market signal which supports and accelerates the uptake of low-GWP refrigerants, for which the following options should be considered:

- To introduce a **malus scheme on the energy efficiency requirements to penalise appliances which use refrigerants with the highest GWP allowed in the market**. Based on the “polluter pays” principle, appliances using refrigerants of GWP>3 should have additional 3 points on the EEI from the entry into force of the Ecodesign Regulation to steer the market towards the use of refrigerants with reduced harmful impact on the environment.
- We call on the European Commission to **add the refrigerant charge** – as in the new regulation on commercial refrigeration – **as well as the GWP of the refrigerant to the information requirement**⁶, **together with an statement indicating the environmental impact of refrigerant leakage:**

“Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP,

⁵ See here: <https://greensciencepolicy.org/phosphate-flame-retardants-bad-to-the-bone/>

⁶ The refrigerant should be declared according to the ASHRAE Standard 34. These are the R-numbers e.g. R32, R410A, etc.

if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to [XXX]. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be [XXX] times higher than 1 kg of CO₂, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a repairer.”

- To include a pictogram in the energy label indicating if a product contains a natural refrigerant and/or lower-GWP (GWP ≤ 150) or a higher-GWP refrigerant (GWP > 150). It is our opinion that the refrigerant information label required by Regulation (EU) 517/2014 on fluorinated greenhouse gases does not properly reach consumers because it is displayed on parts of the product that are not visible, i.e. on the back panel. Hence, consumers are unlikely to receive any information to allow comparison with more environmentally friendly appliances.
- **Restriction of use of HFOs.** These refrigerants – which are not covered by Annex I of the F-Gas Regulation nor affected by the Kigali Amendment to the Montreal Protocol - do not have an ozone depletion potential and some of them have the same order of magnitude as that of natural refrigerants such as CO₂ or Hydrocarbons. However, HFOs pose substantial potential risks, which should not be neglected, including environmentally harmful and toxic by-products on production and decomposition, environmental persistence, toxic flammability and potential recycling challenges.⁷

Improve the label design

We regret that no icons have been envisaged that could help consumers buy more durable, repairable products, such as the free warranty period offered by the manufacturer or spare parts availability. DG Justice’s behavioural study⁸ on consumer engagement in the circular economy describes how effective this could be in shifting purchasing decisions towards products with greater durability and reparability.

END

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⁷ On environmental impacts of HFOs and their byproducts see for instance:

<https://eia-international.org/wp-content/uploads/2019-High-Stakes-Spreads.pdf>

<https://www.kth.se/en/itm/inst/energiteknik/forskning/ett/projekt/koldmedier-med-lag-gwp/low-gwp-news/potentiella-faror-med-trifluorattiksyra-tfa-1.602615>

Scientific Assessment Panel (2018). Scientific Assessment of Ozone Depletion of The Montreal Protocol, p. 6 and 40

⁸ https://ec.europa.eu/info/sites/info/files/ec_circular_economy_final_report_0.pdf