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energy people

Review study of the existing ecodesign and energy labelling measures for household tumble driers covered under Commission Regulation (EU) No 932/2012 and Commission Delegated Regulation (EU) No 392/2012

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1	1	3	Scope	*"Gas-fired technologies represent a small share of the market which is expected to vanish by 2030, and according to information from industry, no major improvements are expected to happen in the future. Limited data available on energy efficiency and consumption confirm this, but it shall be discussed further at the stakeholders meeting. Therefore, it is questionable whether these should remain in scope of the Regulations."*	We believe that in no case a technology should fall out of the scope of the regulation and that gas-fired technologies need to remain in the scope to avoid any loopholes and non-regulated products taking over the market again. In addition, as suggested by the UK at the 1st stakeholder meeting, we invite the study team to assess the combustion emissions to allow informed decisions later in the process. In the absence of data, we call on the study team to carry on the work based on their own assumptions in order not to miss this opportunity.	
2	1	All	Scope	The study does not make any mention of professional and semi-professional tumble driers. 1. Even though **professional tumble driers** are covered in Lot 24 (which has not moved forward), their status and description is not mentioned. 2. Today **semi-professional tumble driers** (used in multi-family houses) are classified as household tumble driers. This is however a grey area because the current regulation and the preparatory study state that the scope applies only to tumble driers for households and they are not directly mentioned in neither. This could be seen as a loophole because semi-professional tumble driers are not placed in the household!	The review study on Lot 16 household tumble driers should be taken as a golden opportunity to move forward on Lot 24 and to unlock the savings potential derived from regulating professional wash appliances. We would like for semi-professional tumble driers to continue to be treated as household tumble driers. To avoid any future ambiguity, the preparatory study should include a definition of these products in order to specifically add them to the scope.	
3	1	67-68	Standards on material efficiency	Correct the references to the standards: *prEN 45554* *This European Standard is currently under development and deals with the assessment regarding the ability to*	prEN 45553 General method for the assessment of the ability to re-manufacture energy-related products	

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				remanufacture energy related products. The aim is to ensure a general method for assessing the ability to remanufacture energy related products. *prEN 4555~~5~~* *This European Standard is currently under development and deals with methods for the assessment of the ability to repair, reuse and upgrade energy related products.*	prEN 4555<u>4</u> General method for the assessment of the ability to repair, reuse and upgrade energy-related products	
4	3	110	Larger capacities	*"If the average load at 3.2kg of laundry is used, then driers with a capacity of 7kg or more (which is >98% of all sold condensing driers and >70% of air-vented driers in 2016, see Task 2) is on average running below even the partial loading capacity (i.e., half load) used in Regulation 392/2012. The driers are hence labelled at running conditions which they seldom, if ever, operate in. The introduction of driers with a capacity of 10kg seems especially disproportionate."* *"Users are heavily influenced by the energy efficiency when buying new tumble driers, but as the efficiency of the driers are generally higher at larger capacities (especially heat pump driers due to compressor efficiencies in general), users could be biased towards buying driers with higher capacities which are labelled as more energy efficient, although they in real life conditions – due to part load operations – may not be.* *The current testing procedures at full and half load conditions can hence be used as a comparative tool between products but is unlikely to represent the real annual energy consumption for the average user, and less so in the future with foreseen increasingly large capacity driers on the market. Changing the testing procedure to reflect the real use, could potentially reverse the trend of manufactures producing unnecessary large units, and emphasize the importance of having driers which can differentiate between being fully loaded and being almost empty."*	We welcome the reflection on the trend towards increasingly larger capacities and it being identified as a major drawback to the impact of the Ecodesign and Energy Labelling Regulations. This is indeed a problem that has also been identified in other product categories and which undermines the energy savings linked to the Ecodesign and Energy Label measures. We call on the study team to propose more stringent requirements as the capacity increases. We recommend that the study team assesses options such as the use of moisture sensors - which would automatically stop the machine when a certain level of dryness is reached, in order to mitigate the risk of higher consumption for larger capacity appliances when not fully loaded. In the case of washing machines, larger capacities issue has eaten up a large part of the expected energy and water savings, and the current EEI formula is one of the causes of this unfortunate situation. An analysis by Topten Europe has shown that currently good efficiency levels are mainly reached by adding capacity and not reducing energy consumption[1]. This is because the capacity is often more significant for determining a machine's energy efficiency class than the energy consumption. We invite the study team to draw inspiration from the new proposals on washing machines, fridges and displays, where it was attempted to tackle this issue. The washing machine draft proposes to have a quarter, half and full load test to avoid machines getting bigger. We, however, believe that a	

[1] Anette Michel, Sophie Attali, Eric Bush. Topten 2016. Energy efficiency of White Goods in Europe: monitoring the market with sales data – Final report. ADEME, 72 pages.

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					fixed small load would be more effective because the consumer's average load does not change in function to the size of the tumble drier they own. At the same time, we are of the opinion that the test method should be closer to real life use in order to provide consumers with useful and reliable information. Also, we believe that the capacity of tumble driers should be in line with the capacity of the washing machines (or it should be even smaller). Therefore, the formula should not favour tumble driers which are bigger than washing machines.	
5	3	120	Durability test	*"According to manufactures tumble dries are tested with a durability test which ensures a lifetime that fits with the brand of the tumble drier."*	We encourage the study team to provide further details on the durability tests manufacturers perform as these could serve as an inspiration for the work to come on tumble drier material efficiency requirements.	
6	3	124	Durability	Measures that can facilitate repair	Further possibilities of measures that can facilitate repair to be looked at within the study: ▪ Spare part availability One of the major factors causing unsuccessful repair of products is the availability of spare parts in terms of: • being able to find spare parts for purchase (17% of those trying in a recent survey[2] could not find suppliers for the necessary parts) and/or • the prohibitive cost of spare parts (18% of those trying to carry out repair found the parts too expensive). Therefore, the availability of spare parts is a key material efficiency consideration that requires policy attention. ▪ Durability requirements on early breaking parts ▪ Access to key components for dismantling ▪ Spare part maximum delivery time to a fixed number of years that is representative of the expected lifetime of the product ▪ Spare part maximum delivery time ▪ Unrestricted independent operator access to	

[2] https://www.ellenmacarthurfoundation.org/assets/downloads/ce100/Empowering-Repair-Final-Public.pdf

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					information on repair ▪ Requirements for dismantling instead of for "disassembly" to go beyond material recovery and recycling, and to also facilitate repair ▪ Restrictions on the use of plastics/polymers that impede adequate recycling, such as non-compatible for recycling polymer blends, incompatible coatings, very dark plastics that have no recycling routes, etc. ▪ Marking of plastics and additives according to the relevant ISO standards, particularly marking content including flame retardants The study team could also mention the study on the repair index and discuss the usefulness of implementing it for tumble driers.	
7	3	136	Tolerance	*"As the standardisation group has created very thorough testing procedures and continuously works to refine them, no reasons to increase the tolerances have been found."*	Art. 7 of the regulation indicates "assessing verification tolerances set out in the regulations" as one of the objectives of the review, while the study concludes that there is no reason to increase the verification tolerances. Assuming that the quality of test methods improves, we invite the study team to also assess the option of decreasing the tolerances.	
8	1	43	Low power modes	The study mentions that there are only 2 low-power modes for tumble driers (off-mode and left-on mode). *"Tumble driers do in some models offer "delayed start" options. These modes are not covered in the standby Regulation, as this mode does not last for an indefinite time. Similarly, tumble driers have a left-on mode, after operation. This mode is also not covered in the Regulation, as the mandatory power management system turns the appliance off after a set amount of time. Furthermore, left-on mode requires no further user intervention by the end-user, which happens when appliances are on standby, due to reactivation.* *The study also does not investigate the networked standby function.* *Left-on mode and off mode are indirectly regulated in the ecodesign and energy labelling Regulations of tumble*	As it is the intention of the Commission to take a vertical approach in regulating standby consumption, the study should investigate the low power modes further, and notably envisage decreasing the thresholds to at least the levels discussed as part of the draft horizontal regulations on standby and network standby.	

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				driers are they are included in the EEI calculation. If the tumble dryer regulation were to align with the regulation for washing machines, the low power modes will fall out of the EEI equation which means that they will not be reflected anymore."		
9	4	142	Refrigerants	It has been established by the study that the heat pump technology is taking over the market. This will lead to a large quantity of refrigerants with high GWPs to be put on the market. The study does not reflect however on the impact of the refrigerants that are in the heat pumps. A report from the Energy Efficiency Task Force of the Montreal Protocol[3] states that the choice of the refrigerant only impacts the energy efficiency of the product by maximum 5-10%. This is considered to be insignificant and is compensated by the CO_2eq. avoided by a low GWP refrigerant. **The F-gas regulation does not explicitly mention tumble driers in its scope.** The refrigerant charge being small, this does not represent a large security issue if the product contains more flammable refrigerants.	Based on the overall increase of heat pump technology within the tumble driers market, we invite the study team to further assess the existing options and low GWP units, and even to explore a bonus system as it was the case with AC units using low GWP refrigerants – or a malus system for those appliances with high GWP. The study should include broken down data per type of refrigerant to identify the best technology available in terms of refrigerant use.	
10	1	45	Condensation efficiency	The threshold for a Class A condensation efficiency is 90%. Classes D to G have already been removed from the market. Technological improvement has also taken place for this function which is important because it puts less burden on the secondary energy system of the room where the tumble drier is located. Today there are already models that reach a 95% condensation efficiency (e.g. Miele).	A re-scaling of the condensation efficiencies is most likely needed since from the A-G scale only classes A, B and C can be put on the market. This does not fully exploit the A-G scale. We recommend performing an assessment of what the best condensation efficiencies are, and to gather some data on this aspect.	
11	3	100	Consumption denominator	For washing machines and dishwashers there are similar discussions to change the denominator from an annual to a cycle-based consumption which removes the assumption on the amount of cycles per year.	Annual or cycle consumption. The denominators for tumble driers should be adapted to the outcome of the discussions on washing machines (and washer driers) to allow for comparability and understanding from the consumer.	
12		All		We believe that the preparatory study should present the technical basis to define future ecodesign and energy labelling requirements based on the existing Regulation (EU) 932/2012 and 392/2012 while avoid taking strong position unless substantiated.	We encourage the study team to use a more balanced approach throughout the assessment in order to avoid making decisions at this stage of the process. Some examples: *"it is clear that existing market forces are regulating the*	

[3] http://conf.montreal-protocol.org/meeting/oewg/oewg-40/presession/Background-Documents/TEAP_DecisionXXIX-10_Task_Force_EE_May2018.pdf

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					market towards using condenser driers instead of air-vented. This might nullify the effects of new ecodesign Regulations on these types of driers, as they are gradually being removed from the market on a voluntary basis." *"The low collection rate of tumble driers can challenge the improvement potential of any suggestions regarding resource efficiency since many products do not reach the desired recycling facility."* *"Some requirements may be difficult to address from a market surveillance perspective because the requirements are difficult to control such as requirements of ease of dismantling."* In this sense, several of the above-mentioned statements can already be challenged. For instance, note the proposed requirements on dismantling and disassembly for washing machines and dishwashers. While the verification of requirements for ease of dismantling are already being implemented in IEEE standards based on documentation, we could also imagine establishing a simple test procedure to be carried out by independent laboratories. We therefore invite the study team to focus more on the opportunities that resource efficiency parameters may offer, rather than highlight the challenges, responding to the clear political guidelines foreseen in the Ecodesign Working Plan 2016-2019.	
13	3	117	Resource efficiency	The preparatory study concluded that the technological improvement of tumble driers will take place through an improvement of its main components. Resource efficiency should be treated similarly, and the resource efficiency potential should be assessed on the basis of its components – identifying the key components and the ones that are the most subject to fail. The durability of the machine is strongly correlated with how the consumer uses the machine.	The study should investigate resource efficiency aspects on the basis of the components. It should also take into account the user's behaviour that could negatively affect the durability of the machine (benefits of self-cleaning filter for users that do not properly clean their device).	
14	3	126	Repairability & Critical components	Through the NGO network working on repair, we acquired the following information corresponding to the largest retailer of EEE in France. ▪ Lifetime of a tumble drier: o median lifetime: 8 years ▪ Reasons for replacement of tumble driers and failure rate:		

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- 87.5% of the tumble driers were replaced because of a failure, and
- 12.5% while they were still working.
- The failure rate before the legal warranty period (in France 2 years) is 3.6% (a stable figure from 2015 to 2017)

- Ranking of replaced spare parts (very often the tension idler will be replaced alongside the strap/belt)
  - For the least reliable product:

Pump	41,70%
Strap/belt	28,41%
Resistance	15,87%
Tension idler	6,27%
Drum	3,32%
Turbine	1,85%
Thermostat	1,48%
Bearing block	1,11%

  - For the most sold model (with a failure-rate slightly better than the average):

Resistance	42,19%
Pump	18,75%
Strap/belt	14,06%
Turbine	13,28%
Drum	9,38%
Tension idler	2,34%

In view of this retailer's experience, top 3 failing spare parts would be: Pumps, Resistance and belts although the order may vary.

- Spare parts average price depends on brands but indicative prices:

25€ et 50€ for pumps10€ et 15€ for belts/straps

10€ et 30€ for tension idler

40€ et 80€ for resistances

100€ et 180€ for drums

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				15€ et 40€ for turbines 10€ et 30€ for thermostats 15€ et 60€ for bearing blocks		