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Comments from:	Date:	Document:	Project:
ECOS-EEB-Coolproducts	//04.08.2020	Submitted for the 1st stakeholder meeting	Ecodesign preparatory study for electric kettles (DG ENER)

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				ge	Coffee machines where included in the Ecodesign & Energy Labelling Working Plan 2016-2019 but have not been further investigated so far. In case these are excluded from the scope of this preparatory study ECOS urges the Commission to launch the preparatory study for non-tertiary coffee machines as soon as possible in the scope of the upcoming 2020-2024 Working Plan.	 Include coffee machines as part of this preparatory study. If this is not possible, the European Commission should launch the preparatory study for coffee machines as soon as possible in the scope of the 2020-2024 Working Plan 	
				ge	Certain proposals for exclusions in terms of scope are not sufficiently justified. We see the following problems: Firstly, it is unclear why 10l is chosen as maximum capacity. Reference to a commonly used safety standard (EN 60335-2-15 on p. 16, l3) is an insufficient justification as it does not mean that products above 10l have a small environmental impact. Secondly, it is unclear why the study scope is limited to household appliances as this has not been specified by the 2016-2019 Working Plan, nor by its preparatory study (BIO 2015) which defines electric kettles as "kitchen appliances used to produce hot water using electrical heating for hot drinks and food". ECOS believes kettles for commercial use should at least be included to assess the environmental significance of the appliances under scrutiny. Lastly, data on B2B sales should be included as well before reaching conclusions on the scope (see comments Task 2 and 3). A broad scope encompassing a wider variety of kettles would mean more savings and environmental gains. In the comments below we specify why we think stronger	 Provide sound, data-driven justifications, specifying how each exclusion affects environmental impacts and energy savings Broaden the proposed scope unless sufficient reasons otherwise can be found 	

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					justification based on data is needed for the main exclusion proposed by the study.		
1	p.14 6- 10			ed	This paragraph is confusing	Change into: "Certain boiling water heaters can provide boiling water for food and drinks as well as other domestic uses. In this case boiled water heaters are covered by Commission Regulation (EU) No. 814/2013 7 (Ecodesign) ⁸ and Commission Delegated Regulation (EU) No. 812/2013 (Energy Label) ⁹ for water heaters. When used only for food or hot drinks boiling water heaters are excluded from the water heater Regulation."	
1	p15 l 21			te	Appliances producing only hot drinks (tea or coffee) instead of hot water are excluded since it is argued that "the expected energy service of the product group is to produce hot water, which will then be used for the preparation of hot drinks and food", We do not see why appliances should be excluded because they directly provide hot drinks instead of water used for hot drinks. Exclusions should be argued for based on an assessment of the expected environmental impact.	 Specify how the exclusion affects environmental impacts and energy savings Broaden the proposed scope if insufficient reasons can be found 	
1	p. 16, l3- 4			Te	Urns with a volume above 10l should not be excluded based on the scope of a safety standard. Furthermore, the 15-17 study (Task 3, p.77) states that "large-size kettles that keep water hot (urns) will consume more energy per litre of water"	 Specify how excluding urns larger than 10l affects environmental impacts & energy savings; Assess inefficiency of large size kettles; Broaden the proposed scope to 26l if insufficient reasons can be found 	
	P15 I 22			te	The arguments to exclude stand-alone hot water dispensers refer to (1) the fact that they only supply one	 Include stand-alone hot water dispensers in the scope of the study 	

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					cup of hot water and (2) might be a niche product category. Boiling one cup instead of an entire jug is a more efficient technique. Therefore, we think it should be included in the scope of this study as it can provide an example of efficiency other products should live up to. The second argument should be substantiated with full data and not only B2C data	Determine whether it is a niche product based on full (including B2B) data sets	
1	p15 l 22- 28			te	The argument to exclude boiling water heaters because they are part of a system is insufficient. While it could well be that this is a niche product that operates efficiently as argued during the stakeholder meeting, this should be substantiated with data and specified in the report. Regarding market shares this should include both B2C and B2B data (see comments Task 2).	 Specify how the exclusion affects environmental impacts and energy savings Broaden the proposed scope unless sufficient reasons otherwise can be found 	
1	p.15, l 31		Scope/definiti on	te	Due to (1) the insufficient justification of limiting the scope to "domestic" appliances, (2) the insufficient justification of limiting the scope to 10 litres, and (3) the lack of data to substantiate certain exclusions, ECOS does not support the definition as proposed by the study team. We propose to replace "boiling", with "heating" in order to ensure that kettles with a pre-set temperature function are included.	Until sufficient justification can be given to potentially restrict the scope, we propose to either - stick to the WP definition: "kitchen appliances used to produce hot water using electrical heating for hot drinks and food" or - use the following adjusted definition: "Electric kettles" are stand-alone, unpressurized, electrically powered domestic-kitchen appliances primarily intended for boiling heating a batch of up to 10 litres of drinking water, potentially also including a warm-keeping function after heating"	

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	p.18		Figure 1-6	ed	There is no clarification on the categories and features. Some are confusing, such as the two filter features.	Provide brief definitions of terms (especially of those that are also relevant in the subsequent tasks)	
1	p.19, I 2		Functional Unit	te	The functional unit of 1000l/year/household seems very high for non-UK-countries without a tea-drinking-culture.	Provide more data to support the functional unit of 1000l/year	
1	p.23, I 4		test standards	Ge/te	In order to compare different kettles a standard volume of for instance 1I should be measured instead of the maximum capacity. If 1I is chosen a method should also be developed for kettles smaller than 1I, as well as for comparing the efficiency of larger appliances compared to smaller ones.	Provide an overview of all methodological aspects that need to be covered by test methods	
1	p.26, I 43			te	Many details re given on the WEEE Directive but it would be more useful to have this information already applied to kettles	Provide information on WEEE by applying it to kettles	
1	p. 26, I 46			te	The 6 substances excluded by the RoHS Directive for kettles are not listed	List of substances excluded for kettles	
1	p.27 l 25- 26			te	Specific requirements for kettles under waste legislation are missing	Provide more details on requirements for kettles under waste legislation	
1	p.27 l 25- 26			te	Specific requirements for kettles under REACH are missing	Provide more details on requirements for kettles under REACH	
1			Table 1-6	te	The material requirements of this label could be a useful source of inspiration for a potential Ecodesign and Energy labelling regulation. Currently these are only partly specified	Add exact material requirements of Blue Angel label	
1			Table 1-7	te	The material requirements of this label could be a useful source of inspiration for a potential Ecodesign and Energy labelling regulation. Currently these are not specified	Add exact material requirements of Korean label	
1			Table 1-8	te	The material requirements of this label could be a useful source of inspiration for a potential Ecodesign and Energy labelling regulation. Currently these are not specified	Add exact material requirements of Korean label	

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1	p.30		1.5.3	te	There is no section for test standards developed independently from legislation, such as the Topten.ch test standard. Other test methods quoted later in the study such as Stiftung Warentest and similar testorganisations should be included here as well.	Please include additional test standards e.g. from Topten.ch and Stiftung Warentest in the overview	
2	p.16 l 14		Market and stock data	ge	Commercial appliances for restaurants, hotels, offices, hospitals, nursing homes, etc. are not included in the data unless purchased through a non B2B channel, yet could have a substantial environmental impact. Claims on marginal market importance should be backed up with data on commercial use as well. As pointed out in Task 1 comments, omitting this part of the data might lead to unjustified scope exclusions such as urns larger than 10l as well as a range of kettle types	Obtain B2B data on commercial appliances to better assess whether the proposed exclusions are justified.	
2	p.20 l14		Sales – boiling water heaters	te	What are the other manufacturers of boiled water heaters? Are there different types than the Quooker? Are sales increasing?	Include more data or at least assumptions based on other manufacturers market shares and types of boiling water heaters.	
2	p.23 5- 13			te	By using the definition of GfK the number of 200.000 urns, or 0.2% of electric kettles cited here is an underestimation based on B2C data only. While this is acknowledged in the report, the percentage and figure for urns should reflect this since the lower number is currently used to justify a scope exclusion. On line 11 it is acknowledged that commercial urns have much higher sales numbers than those for domestic uses.	Include B2B data to justify exclusion. If this is not possible large urns should be included in the scope of the study as these seem to be less energy efficient (see BIO 2015, Task 3, p.77)	
2	p.26		Rated volume	te	Missing data on commercial appliances influences the conclusions on rated volume.	Adjust the conclusions based on inclusion of B2B data	
2	p.27 l 5		Material of the housing	te	What type of metal is meant? Stainless steel, aluminium, copper? Some types such as aluminium and copper represent a more significant risk to the environment than stainless steel	Specify what type of metal is used	

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2	p.31 8		Urns	te	Missing data on commercial appliances, and the explicit exclusion of appliances with a capacity of above 10l, influences the conclusions on urns.	 Include data on urns with a volume between 10 and 26l Adjust the conclusions based on inclusion of B2B data 	
3	173	3.1.2	Extended product approach	ge	Commercial use should be considered, especially in offices. Also kettle use in restaurants/hotels would be important to include in the study as this is likely to be used higher. Some may even run 24/7 e.g. in hotel lobbies	Include considerations of commercial use (offices, restaurants, hotels, hospitals, nursing homes, etc.)	
3	225 and 338		Descaling	te	It is not mentioned what effect descaling has on energy use. Is it necessary to maintain energy efficiency or is it the same? What is the effect (in % increase?) Regarding the effect of limestone on the kettle's lifetime, an explanation of the process would be useful.	 Explain the (negative) effect of not descaling and provide data on increase of energy consumption. Explain the effect of limestone on kettle lifetime 	
3	287		Question 3-2	ge	There is no information requested from stakeholders on how often the "keep warm" function is used. While this function is usually combined with the energy saving "set different temperatures" function the keep warm function is a potential energy waste. Therefore, information on how often/how long the keep-warm-function is used is important from an energy-consumption-perspective.	Include data on the use of the "keep warm" function	
3	392			ge	Electric kettles are faster and more efficient to heat water than other means such as on a hob. There could thus be future uses for electric kettles which are not yet included in the study e.g. heating water for cooking pasta etc.). These will increase the functional unit. Faster kettles can be a lever for consumers who do not consider energy use, but the time it takes until the water boils. This links to the recommendation not to cause a shift towards cooktop use (line 617)	Point out (maybe with a table) that electric kettles are fastest and most efficient reflecting the test done by Stiftung Warentest	

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3	459		Figure 3-6	te	The conclusion of an average lifetime of 5-7 years drawn from a replacement cycle of 5.7 years in the study but with a standard deviation of 4.2 years seems random. It would be good to distinguish products and their associated lifetimes (e.g. travel-sized kettles with an assumed shorter lifetime vs. better quality kettles with a longer lifetime).	Provide a more accurate conclusion for average lifetime Distinguish between products according to lifetime	
3	555		Question 3-5	re	Labelling the time it takes to boil 1I (or 1 cup) compared to boiling on the stove.		
3	555		Question 3-5	re	A <u>steel kettle descaler</u> in the kettle reduces limestone while less chemical product is needed. This is both cheaper and better from an environmental perspective. It currently does not come with the kettle. Including it as a standard part or encouraging consumers to use it could be a low-cost option to improve the environmental performance of kettles provided that consumers are informed about the advantages.	 Mention this as way to improve user behaviour Include among best practices in Task 4 	
4	226		Material	ge	To improve kettle recyclability the use of plastics should be restricted since recycling operations of plastics such as PVC (Polyvinyl chloride) are currently not mainstreamed nor will they be cost-effective anytime soon because of their heavy content in (REACH) regulated substances. When it is impossible to replace plastic, alternative polymers that require fewer chemical additives in their formulation such as PP and HDPE should be used.	Include health and safety as well as recyclability considerations with regards to chemical content to identify potential material and substance alternatives	
4	226		Material	te	There is no mentioning of the potential chemical leaching of plastics and other materials (enamel, ceramic, aluminium, coatings sealants and others.) and concerns for food safety (BPA and others). To avoid	Consider this topic and specify relevance for electric kettles design.	

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					such leaching the heated water should not be in contact with plastics.		
4	371		Keep warm function	te	Is the keep warm function always equipped with a timer?		
4	437	4.1.4.1	Two-chamber water kettles	ed	A picture as used during the presentation could clarify the operation	Provide a picture to make it clearer how it works.	
4	548	4.2.1	Base Cases	te	While we largely support the proposed base cases, these are defined to test the proposed scope of the study. However, since the exceptions to the scope proposed should be better justified (see comments above), additional base cases should potentially be considered to investigate the energy and material efficiency of other types of kettles.	Include additional base cases on other types of kettles	
4	548	4.2.1	Base Cases	te	All three base cases are plastic kettles. In Task 2 it is mentioned that the use of plastic decreases and now nearly the same as metal, while glass is growing. Assessing the difference of material used (also specifying what types of metal, plastic or glass) could provide useful insights on which material is preferred for which reasons.	Include variation in the material by including a metal and glass kettle or provide an alternative way to assess preferable material	
4	548	4.2.1	Base Cases	te	None of the base cases have a higher capacity than 1.7 litres. The study should determine whether larger kettles might operate more or rather less efficient	Include additional base cases to investigate energy efficiency of larger kettles	
4	571	4.2.2	Bill of materials	te	Why are no scaling and calculations done when a material is necessary to operate a kettle? These could still be substituted with improved material	Include scaling and calculations for all materials and/or reformulate remark to clarify what is meant	
Excel Task 5/6	Row 17	BC Performance	Litre/year	te	As mentioned above, 1000l/year seems to be too high for the functional unit. Might distort the LCA and LCC result	Double-check 1000l/year as functional unit	

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Excel Task 5/6	Row 7	Improvement Measures	Material	te	Impact of material substitution on food safety, energy from whole lifecycle (esp. energy-intensive production of steel), etc.is missing.	Include more aspects of the material substitutions.	
Excel Task 5/6	Row 31	Improvement Measures	Water usage	te	To reduce overboiling it is proposed to investigate the effect of the water level indication starting at 0.25 instead of 0.5 I However, 0.25 is still too much for smaller cups so we propose to investigate as of 0,125 I. In addition, the effect of indicating the water level in terms of cups should be assessed as well.	 Change to 0.125l. Investigate the effect of indicating the water level in terms of cups 	
Excel Task 5/6	Row 23	Improvement Measures	Temperature control	te	In a case a timer is not automatically part of kettles with a keep warm function, it would be good to consider the effect if it does	Consider the effect of having a timer preventing continuous keep-warm function	
Excel Task 5/6		Improvement Measures	Repairability: Spare parts	te	Spare parts and certain design options (such as a cordless kettle of which the container can be replaced, a replaceable filter and lid) can greatly extend the lifetime of a product	 Investigate which parts are most likely to break down investigate the availability of weak parts as well as replaceable parts that enhance durability 	

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