

## JRC B5 Ecodesign / Energy Labelling comments form

No.	Comment from	Contact person	Reference: - section/task - page	Subject of the comment	Comment	Proposal for modification
1	ECOS-EEB-Coolproducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Developing test methods	Several times in the report, JRC calls for the development of standard test methods to measure energy consumption for appliances where this is missing. The lack of test methods should not interfere in setting requirements for aspects that are environmentally relevant. In cases where there is no standard the Commission should issue a Standardisation Request to allow for the standards needed to be developed by the time the regulation enters into force, and specify interim measuring methods in annexes until standards are harmonised.	
2	ECOS-EEB-Coolproducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Regulation for commercial and professional refrigeration	We welcome the conclusion that regulation for commercial/professional cooking appliances is necessary. A precise and tight timeline should be defined in order to avoid delays. Test methods are almost ready for certain appliances (like professional ovens). We request that this product category is prioritised for the Ecodesign and Energy Labelling Working Plan 2020-2024.	
3	ECOS-EEB-Coolproducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	EL for ovens	Ovens are one of the most inefficient household appliances. We firmly believe that the energy label should not be questioned as it is a crucial tool for informing consumers and pushing improvements.	
4	ECOS-EEB-Coolproducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	BM2.0	There is a later version of the Brick Method 2.0 which should be used for the regulation (one that includes a test method to distinguish standard and eco functions).	

5	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	Overarching	Incentivizing food-based test	To incentivize the completion of the test based on real food, we support the second option with a 80/20 approach. We are in favor of conditioning the Ecodesign minimum EEI for Tier 1 to the availability of a test based on real food on time. The Ecodesign minimum EEI for Tier 1 could be higher if the food performance test is ready. This would have an incentivizing effect, but has no influence on the formula or on the energy class threshold.	
6	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	Overarching	SEC, decoupling volume	We support the flat approach for the SEC calculation that is proposed in the study (and as second choice the Ln approach), as it would give an advantage to small/medium ovens over larger ones. Small ovens cost less and consume less. If manufacturers want to propose a very large oven, they will have to innovate in order to improve their efficiency. The flat approach goes towards sufficiency.	
7	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	Overarching	Microwave- combi	The MW-combi and automatic functions could be considered and tested as ecomodes as soon as the cooking performance test method is ready. It will be another incentive for manufacturers to quickly develop this new test method.	
8	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	Overarching	3 <sup>rd</sup> family gas oven in the scope, aligning test methods	We welcome the proposal to include appliances which work with gases of the 3 <sup>rd</sup> family in the scope of the regulation. The test method for gas ovens should be aligned with the one for electric oven (BM2.0), to better enable comparing. Manufacturers should be asked to have it ready for the next revision of the regulation. When the test method is unified, the energy could be indicated in final energy on the label, but the energy class could be defined in primary energy to be able to compare both types of ovens in a fair way.	
9	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	Overarching	Advertising energy saving modes	Energy saving modes are proposed for several years now and as the user behaviour study indicates they are not extensively used. We believe the energy declaration should be based on the standard mode as this is the best reflection of how the oven is used. If it is however decided to consider energy saving modes for energy declaration, a clear and detailed communication plan to advertise these modes should be implemented in parallel. We do not think that the sole promotion in user manuals is enough.	

10	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Standardised symbols	It seems necessary that the different oven modes are clearly identifiable on the display, in the user manual, on the label (standard -hot air, conventional-, eco). To this end, standardization of the symbols as well as programme names is necessary. They could be chosen in accordance with <a href="https://www.iso.org/obp/ui/">https://www.iso.org/obp/ui/</a> (example reference 5610 for hot air).	
11	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Solo-microwave in scope	We recommend including solo microwave ovens in the scope of the regulation in this revision in using the dedicated test method.	
12	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Common test method for gas and electric hobs	We ask the manufacturers to work on a common test method for gas and electric hobs to be ready for the next revision.	
13	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Proposed Energy Label for fume extractors	Of the proposed labelling options for fume extractors, we support option a on p.435, but we propose to base the labelling on a variation of the 9-point method with weights. Here, the lowest back-pressure has the highest weight as this will give equal representation of the efficiencies at the three back-pressures. We further propose that the 9-point method should also be adapted to include the odour removal factor and a penalty factor for high airflow. For standard fume extractors installed on top of the cooking surface/hob, a standard value for the odour removal can be used. We also propose that energy labels are introduced for recirculating fume extractors, using a standard filter as specified by the manufacturer and including the odour removal factor. For fume extractors with both extraction and recirculation options, two labels should be provided.	
14	ECOS-EEB-Coolpro	Carolina Koronen ,	Overarching	Proposed Ecodesign	On ecodesign requirements for fume extractors, recalculation of costs of brushless motors must be considered, since the cost are currently unreasonably high. If they result in brushless motors	

	ducts-R2R	carolina.koronen@ecostandard.org		req. for fume extractors	being the LLCC option, ecodesign requirements must be set to enforce a change to brushless motors. Evaluation of ecodesign requirements should be based on the same measuring method proposed above for labelling with a modified 9-point method including higher weight of efficiency for the lowest back-pressure, odour removal factor and penalty for high airflow.	
15	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Permanent ventilation	We support that annual energy consumption for use of the low power mode with permanent ventilation is included on the label as a separate value (not included in the A-G rating).	
16	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Using EPREL database	No reference to the EPREL database is made in this study. We would like to know if it has been explored in order to get more data on Energy Efficiency of existing appliances.	
17	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Information on energy label	The topic of the information to be indicated on the oven label has not been addressed. We believe it should be.	
18	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	Overarching	Material efficiency	In comparison with other preparatory studies, e.g. that for smartphones, the analysis and proposed policy regarding material efficiency in this study is on a rather general level. We want to see this study further develop material efficiency recommendations with additional detail and propose an indication of which requirements could be prioritised over others on the basis of the existing evidence.	
19	ECOS-EEB-Coolpro	Carolina Koronen ,	285, 5.1.1.4	Energy consumption of solo	The figures are globally in line with values found in the French monitoring campaign Panel Elecdom ( <a href="https://librairie.ademe.fr/changement-climatique-et-energie/4473-">https://librairie.ademe.fr/changement-climatique-et-energie/4473-</a>	No modification.

	ducts-R2R	carolina.koronen@ecostandard.org		microwave ovens	<a href="#">panel-usages-electrodomestiques.html</a> ) for energy consumption of ovens and solo microwaves ovens in 100 households (slight overestimate of the review study). But pyrolytic cleaning is not taken into account in the calculation of the annual energy consumption of the base case for electric ovens.	
20	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	296, 5.2.2.4	Appliance stock	The ratio average of new appliance vs. stock is not realistic since we know that the declared energy consumption is currently based largely on ecomodes, which is not the function mainly used by consumers.	Reconsider the ratio average of new appliances vs. stock.
21	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	310, 5.3.1.4	Energy consumption of pyrolytic cleaning	It is a good point to analyse the impact of pyrolytic cleaning. This should be taken into account not only in this paragraph but also in the electric oven base case (C1 of table 58 p. 285).	Take pyrolytic cleaning into account in the calculation of the annual energy consumption of the electric oven base case.
22	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	341, 6.1	Popularity of electric oven	Manufacturers report that “The most common electric oven today is in the A energy class”. We wonder if this can be confirmed by other independent sources (Topten, EPREL database).	Compare claim to independent sources.
23	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	342, Table 102	Design options w. mechanical design improvements	No design option considers mechanical design improvement (material –lighter, reflexive, triple glass for the door, type of insulation, sealing...-) that would provide energy savings regardless the type of use. We would like to see such design options being explored.	Consider mechanical design improvements in the design options.
24	ECOS-EEB-Coolpro	Carolina Koronen, carolina.koronen@ecostandard.org	342, Table 102	Design options	DO1 and particularly DO2 are not realistic design options as their (very) good performance is based on an ecomode with limited ability to cook food. The performance of these ovens for a “normal” common use is probably not better than an A oven (see for	Adjust design options so that they reflect a realistic use of the oven.

	ducts-R2R	koronen@ecostandard.org			example <a href="https://www.lesnumeriques.com/four-encastable/electrolux-eob9s31wx-p56757/test.html">https://www.lesnumeriques.com/four-encastable/electrolux-eob9s31wx-p56757/test.html</a> )	
25	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	345, DO5	Design options	If this option is considered it is necessary to develop the corresponding test methodology.	Consider the need to develop test methodology, associated with this option.
26	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	349, DO1	Design options	Different values are given for the energy consumption of DO1 in the text (175Wh/kg) and the table 108 (170Wh/kg) respectively.	Correct the numbers so that they match.
27	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	378, 7.2.1	Efficiency improvement potential of ovens	A neutral research project (Green Kitchen Project, 2014) concludes that ovens offer one of the best areas for improvement with regards to energy efficiency (contradictorily to what manufacturers say), The regulation needs to set ambitious targets that will force manufacturers to innovate. The current Ecodesign regulation does not seem as efficient as for other appliances. The average consumption of a cooking cycle in France is 765Wh which is only 14% less than the one measured 22 years ago in the ECUEL project.	Consider the untapped potential energy savings of ovens and set ambitious regulation that forces innovation.
28	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	378, 7.2.1	Test methods for microwave and combination microwave ovens	The IEC Standard 60705 applies to microwave ovens for household use. It also applies to combination microwave ovens. It describes a standardized method to measure energy consumption ( <a href="https://infostore.saiglobal.com/preview/98703955012.pdf?sku=872594_SAIG_NSAI_NSAI_2074733">https://infostore.saiglobal.com/preview/98703955012.pdf?sku=872594_SAIG_NSAI_NSAI_2074733</a> ). A round-robin testing program has been conducted to evaluate the repeatability and reproducibility of the draft version of IEC Standard 60705 ( <a href="https://www.energy.gov/sites/prod/files/2017/12/f46/mwo-tp-rfi-2017.pdf">https://www.energy.gov/sites/prod/files/2017/12/f46/mwo-tp-rfi-2017.pdf</a> ). This test method could be used to allow immediate inclusion of solo microwave ovens in the scope of the regulation.	Consider the readily available test methods and include microwave ovens in the scope.

29	ECOS-EEB-Coolproducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	379, 7.2.1	Energy saving modes	“Limiting or banning the use of energy saving modes for energy declaration may hinder a significant opportunity for improvement in energy efficiency.” This is true, but only including energy saving modes in energy declaration will not be enough as these modes are rarely used by consumers. It is necessary to address the consumer behavior. Nothing is planned to address this issue.	Address problem of consumer behaviour with regards to energy saving modes.
30	ECOS-EEB-Coolproducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	379, 7.2.1	Energy label for ovens	“It is relevant to explore the possibility of removing the energy label of ovens, especially if no meaningful differentiation between appliances can be achieved.” This option will go against innovations and improvements of energy efficiency. It will be a step backwards. It is worth remembering that ovens are one of the most inefficient household equipment as shown by neutral research projects. A probable contributing factor to the small differentiation is that the ovens are currently tested in unrealistic cooking modes (ecomodes). It is reasonable to believe that there will be more difference between ovens when they are tested in standard mode.	Consider the large energy saving potential in ovens, and do not open for removal of energy labelling.
31	ECOS-EEB-Coolproducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	379, 7.2.1	Networked connection	“The Commission will consider establishing sustainability principles to regulate aspects such as product... upgradability”: it is a particularly relevant aspect to keep in mind if “Electric oven with automatic functions” (DO6) is showcased. Furthermore, some recent ovens have network connection which could have impact on energy consumption (especially in stand-by mode). The possibility to deactivate network connection should be provided (deactivated by default). Networked connection for ovens needs to be explored and dealt with in regulation. We prefer for this issue to be dealt with by horizontal regulation (EU Reg. No 801/2013), but as a second choice it should be addressed in the product specific regulation (as is already the case for e.g. dishwashers).	Explore the networked connection aspect for ovens and how to regulate it.
32	ECOS-EEB-Coolproducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	381, 7.3.1	Representativity of oven database	We should keep in mind that the database is small (only 54 ovens) and is not neutral. It is the manufacturers themselves that have chosen the ovens to be tested. The assumed representativeness is questionable.	The database should be more representative.

33	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	381, 7.3.1	Energy consumption range ovens	“Energy consumption of BPM measured with BM1.0 range from 0.53 kWh/cycle to 0.95 kWh/cycle.”: If these ovens are considered as representative of today’s market it shows that there is still room for energy label (ratio of 1.8 between the most and least consuming oven). But the calculation should be less related to volume compared to the current approach.	Take this into account, regarding the energy labelling.
34	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	382, 7.3.1	Electromechanical ovens	“It can be clearly seen that electromechanical ovens perform worse than electronic ovens in terms of energy consumption.”: We can wonder if they really perform worse or if it is linked to the current test method (BM1.0), i.e. ecomodes are not common (possible?) with electromechanical ovens. If the test is done with standard function in the future, the result could be different.	Discuss the cause of the difference in performance and address it.
35	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	385, 7.3.2.1	Test method for solo steam modes	“Moreover, there is currently no standard test method that allows the estimation of energy consumption of solo-steam modes”. CLC TC59X WG18 is currently working on a test method for measuring the performance of professional steam ovens. The methodology could be adapted.	Consider recent developments of test methods.
36	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	386, 7.3.2.2	Solo microwave ovens inclusion	“In current regulation, solo microwave ovens were left out of the scope for a variety of reasons that are still valid today: Small difference between most and least efficient appliance”: Please provide a source for this statement. Indeed, it is written in §4.1.4.7 page 224 “The [...] potential improvement of microwave ovens appears a topic under debate.” Even if the difference in performance should prove too small to justify energy labelling, the ecodesign requirements will ensure that worst performers are not allowed in the market, and material efficiency requirements will enhance repair and avoid early discard of products.	Include solo microwave ovens in the scope for ecodesign requirements, even if the difference in energy performance is small.
37	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecost	386, 7.3.2.2	Solo microwave ovens inclusion	“In terms of Ecodesign, it might be of interest to include them in terms of minimum energy performance requirements (Policy option 2c), in order to remove the least energy efficient appliances from the market.”: We support this option.	No modification.



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38	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	386, 7.3.2.2	Test method for microwave ovens	<p>“The lack of a standard method to measure their energy consumption prevents from applying this policy at this point.”: The IEC Standard 60705 applies to microwave ovens for household use. It also applies to combination microwave ovens. It describes a standardized method to measure energy consumption (<a href="https://infostore.saiglobal.com/preview/98703955012.pdf?sku=872594_SAIG_NSAI_NSAI_2074733">https://infostore.saiglobal.com/preview/98703955012.pdf?sku=872594_SAIG_NSAI_NSAI_2074733</a> ).</p> <p>A round-robin testing program has been conducted to evaluate the repeatability and reproducibility of the draft version of IEC Standard 60705 (<a href="https://www.energy.gov/sites/prod/files/2017/12/f46/mwo-tp-rfi-2017.pdf">https://www.energy.gov/sites/prod/files/2017/12/f46/mwo-tp-rfi-2017.pdf</a> )</p>	Take these available standards into account.
39	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	386, 7.3.2.3	Inclusion of MW-combi ovens	<p>“Since there is no available standard method to measure energy consumption of those heating modes”: it emphasizes the need to develop a test method based on real food that can be fit all kind of functions. To be included in the next revision of this regulation. These appliances are recognized as an energy efficient option (DO6). They should be included in the scope of the regulation.</p>	Include MW-combi ovens in the scope and request development of test method.
40	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	386, 7.3.2.3	MW-combi ovens	<p>As these appliances create a loophole, we are in favor of introducing minimum energy performance and material efficiency requirements similar to the standard ovens (in a mode that does not use microwave) in this revision.</p>	Include MW-combi ovens in the scope and propose minimum energy and material efficiency requirements.
41	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	387, 7.3.2.4	Available test methods	<p>“Since there is no available standard method to measure energy consumption of those heating modes, these appliances will need to be included in next revision of this regulation.” We do not believe it is for the preparatory study to say what appliances need to be included in the next regulation, as this is a political question. If there are standards missing, the EC can issue a standardization request, while moving on with regulations.</p>	Balance wording so that it provides the technical detail without making political statements.
42	ECOS- EEB- Coolpro	Carolina Koronen ,	387, 7.3.2.4	Applicability of test method to	<p>“Since there is no available standard method to measure energy consumption of those heating modes, these appliances will need to be included in next revision of this regulation.”: Why is the brick</p>	Include portable oven in the scope.

	ducts-R2R	carolina.koronen@ecostandard.org		portable ovens	test not applicable to portable ovens (especially those ones whose volume is similar or slightly less than built-in ovens)? Introducing the same regulation for all the ovens (with certain size compatible with brick test) will also allow to remove the least energy efficient appliances from the market.	
43	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	388, 7.3.2.5	Commercial and professional cooking appliances	The decision to propose separate regulation for commercial and professional appliances is welcomed. A precise and tight timeline should be rapidly defined in order to avoid delay of the project. Test methods are almost ready for certain appliances (like professional ovens).	Stress importance of defining time plan for the separate regulation.
44	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	394, 7.3.4.1	BPM data from Applia	“Updated version, Best Performing Mode, BM1.0”: An update of the Applia database has been released with more ovens inside. It could be used to fine-tune the SEC equation.	Refer to the latest version of the Applia database.
45	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	398, 7.3.4.2	BM2, use of residual heat	“Ovens that might be making an incorrect use of residual heat can be identified easier with BM2.0”: This is only partially true. BM2.0 disqualifies a few ovens that make bad use of residual heat but not all of them. In order to identify all, it is necessary to define additional specific clauses to discriminate standard and eco functions.	Clarify that BM2 cannot identify all such ovens and address this problem.
46	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	398, 7.3.4.2	Test cycle duration	“In phase 2, the temperature is checked for 20 minutes only and not for the whole cycle”: It is no longer true as the test method has been changed on this point to discriminate standard and eco functions.	Refer to the latest version of the standard.
47	ECOS-EEB-Coolpro	Carolina Koronen , carolina.koronen@ecostandard.org	400, 7.3.4.3	Energy saving modes	“If most of the ovens in the market have energy saving modes and their use is promoted appropriately among consumers, there is potential for overall energy savings.”: Energy saving modes have been proposed for several years now but, as the user behaviour	Elaborate how the use of ecomodes should be promoted beyond user manuals, and how effective

	ducts-R2R	koronen@ecostandard.org			study indicates, they are not extensively used (we can even wonder if the question has been well understood by respondents). They also have important limitations in terms of cooking performance. Because of the low use and the performance limitations, we do not support the use of energy saving modes for the purpose of energy declaration. If however, it is decided to consider energy saving modes for energy declaration, a clear and detailed communication plan to advertise these modes should be implemented in parallel. We do not think that promotion in user manuals is enough. A precise definition of what can be baked with the declared ecomode should be provided on the label.	such promotion can be expected to be.
48	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	400, 7.3.4.3	Validation of energy saving mode cooking performance	“Energy saving modes should be allowed for energy declaration, ensuring that they can cook appropriately. One way of ensuring it is with the adoption of BM2.0.”: We do not think that it is sufficient. It should be completed by the definition of the type of function – standard/eco - validated by the test method.	Take the need to define standard and eco functions into account.
49	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	400, 7.3.4.3	Alignment of test method for gas ovens	We notice gas ovens have not been discussed here. Why will the test method not be aligned with electric ovens?	Include discussion on gas ovens and their alignment with electric ovens with regards to test method.
50	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	403, 7.3.4.3	50-50 vs 80-20 approach	“It can be observed that there is not much difference between a 50/50 approach and a 80/20 approach in terms of energy class obtained by the ovens.”: As ecomodes are not the most used we recommend to go for 80/20. It will be an incentive for manufacturers to innovate not only on ecomodes but also on the general features of the ovens (producing savings for all kinds of modes). If ecomodes are more used in the future the formula can be changed in the next version of the regulation. Furthermore, clarifications about the formula to apply if there is no eco function should be given (in this case only standard mode is considered but how?).	Use the 80/20 approach.
51	ECOS-EEB-Coolpro	Carolina Koronen,	403, 7.3.4.3	Differentiation of cooking modes	“For policy option 8c to work appropriately, there should be enough differentiation between the conventional mode and the best performing mode.”: It has been defined and agreed among	Refer to the latest version of the standard

	ducts-R2R	carolina.koronen@ecostandard.org			WG17 in the last version of the standard. The recently agreed version is preferred to the one proposed in this report because this last one can be easily circumvented (see V-Zugg presentation in WG17 collaboration platform).	
52	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	404, 7.3.4.3	Definition of energy saving modes	“This lack of definition for energy saving modes is an aspect to improve from current regulation and standards.”: We agree on the point and welcome this decision.	No modification.
53	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	405, 7.3.4.3	80-20 vs 50-50 approach	<p>“According to the analysis conducted in this section, there is not a significant difference between the use of a 50/50 approach and a 80/20 approach, in terms of energy class obtained by ovens. Therefore, for simplification from now on, only policy option 8c 50/50 will be considered”: see remark above 7.3.4.3 page 400. <u>We are in favor of 80/20.</u></p> <p>Another reason to go for 80/20 is that some ecomodes are more “permissive” than others. They do not all guarantee the same cooking performance (they cannot cook/bake the same dishes). The BM2.0 currently fails to make distinction between them. Knowing this fact, the best option would be to give less weight to eco than standard function if it is decided to determine the energy consumption based on a formula mixing both.</p>	Use the 80/20 approach
54	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecostandard.org	405, 7.3.4.3	Test method for gas ovens	“This method is only applicable to electric ovens, these policy options will only be related for electric appliances”: Gas oven manufacturers should be asked to develop a test methodology similar to BM2.0 for the next revision of the regulation.	Request aligned test method for gas ovens.
55	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen, carolina.koronen@ecost	405, 7.3.4.3	Weighting between BPM and other modes	“A decision still needs to be made between policy options 8b (BPM only) or policy option 8c (weighted sum between BPM and Conventional).”: It is known that ecomodes are not able to cook all kinds of foods and that they are not intensively used. We are not in favor of “BPM only”, since this makes the regulation less consumer relevant.	Take the consumer relevance into account and how it favors option 8c

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56	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	405, 7.3.4.4	Energy labelling for ovens	“Consumers focus on the energy efficiency class”: This is another statement that speaks in favor of keeping energy labelling for ovens.	No modification.
57	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	406, 7.3.4.4	Flat approach for SEC	“The flat approach could reduce the demand of large cavity ovens, which could affect some manufacturers offering a wide range of these appliances. Also, in terms of ecodesign minimum requirements, it would be difficult for larger ovens to comply (the two ovens larger than 80 litres in APPLIA2020 would not comply).”: We welcome the flat approach and the impact it will have on the demand for large ovens. The flat approach is a movement towards sufficiency. Choosing an efficient small oven can also be a pertinent option to reduce energy consumption of the cooking process. If manufacturers want to offer very large ovens they will have to innovate in order to improve their efficiency.	No modification.
58	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	407, 7.3.4.4	Approach for SEC	Our preferred option for defining the SEC is the flat approach. But we would also favor of the logarithmic approach, as a second choice.	No modification.
59	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	409, 7.3.4.5	Linking energy consumption and cooking performance	We welcome the following acknowledgement: “linking energy consumption and cooking performance seems necessary for ovens, since it has been foreseen since the beginning of the regulation process”. To incentivize the completion of the test, we support the second option with a 80/20 approach. Conditioning the A+ energy class, as in the first listed incentivizing option, will be difficult as it would require to change the formula after the regulation has been adopted. Instead, we are in favor of conditioning the Ecodesign minimum EEI for Tier 1 to the availability of a test based on real food on time. The Ecodesign minimum EEI for Tier 1 could be higher if the food performance	Condition the Ecodesign minimum EEI for tier 1 to the availability of a food-based test method.

					test is ready. This would have an incentivizing effect, but has no influence on the formula or on the energy class threshold. What about gas ovens? The same approach should be proposed.	
60	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	412, 7.3.4.6	Energy savings of MW-combi and automatic modes	In the section "MW-combi and automatic functions" the study proposes to "apply a percentage reduction during the calculation of the Energy Efficiency Index" until test methods are developed. As this measure will have a consequent impact on the declared performance, it is necessary to validate the given percentage of savings upstream. Do you have a source for this? We have doubts regarding the real potential of savings (cf. p231 for MW combined functions "the lack of a method to measure energy consumption of such a mode makes it currently not possible to determine how much better these ovens are in terms of energy efficiency" and for oven with automatic functionality "There is currently no data to support this potential improvement, but their feedback indicates that they could reduce energy consumption per cycle by 10%"). We propose to instead stress the necessity of a swift development of a food based test, whereby these modes can be tested as ecomodes.	Acknowledge a swift development of a food-based test as the most important measure to address this problem, and provide justification/ source for the upstream savings in the proposed temporary solution.
61	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	412, 7.3.4.7	Volume in EEI	We support policy option 14a. Removing side racks from the oven is an exceptional, not consumer-relevant use. Measuring volume this way gives a misleading EEI (if volume is a factor in EEI). Another reason to measure volume with shelf racks is that these are needed to perform the measurement of energy consumption, and it is reasonable to keep parameters constant between measuring volume and measuring energy consumption.	No modification.
62	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	413, 7.3.4.8	Pyrolytic cleaning	Consumers should have access to information on the energy use of pyrolytic cleaning, seeing as it can represent a very significant share of the total energy use (Policy option 15b).	Provide information about the energy use of pyrolytic cleaning.
63	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost	413, 7.3.4.9	Pre-heating	"An alternative to avoid this issue would be to include, as an information requirement, recommendations on when to pre-heat and when not to pre-heat the oven." We agree with this idea. However, as long as preheating is suggested in most recipes we doubt it will have any significant impact. User manuals do not seem to be the best means to inform consumers.	Address user behaviour problem and propose solutions beyond user manuals.

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64	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	416, 7.3.5	Tiers	We agree with the tiers proposed in table 132.	No modification.
65	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	417, 7.3.6	Standard program consumer relevance	“Energy consumption for given standard program ranks 3 <sup>rd</sup> ”: This proves that consumer wants to know what the commonly used programs consume and it is not the case at the moment when declaring an Ecomode without writing it on the label.	Include energy consumption of standard cycles on label.
66	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	423, 7.4	Residual heat in gas ovens	We wonder if use of residual heat is common for gas ovens. Have you asked the manufacturers? Without any up-to-date data it is hard to update the threshold. We agree that both regulations (for electric and gas ovens) should stay consistent (same definition of SEC, same way to define the energy class thresholds).	Include information about the practice of using residual heat in gas ovens.
67	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	430, 7.4.1	Energy consumption of gas ovens	The BM2.0 could also be applied to gas ovens. Energy consumption could be indicated on the label in final energy (only in MJ/cycle) but primary energy could be used to define energy class.	Propose energy consumption of gas ovens to be indicated on label.
68	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost	431, 7.4.1	Basic electric ovens	“Gas ovens generally offer two or three basic modes.”. There are also “basic” electric ovens on the market ( <a href="https://www.darty.com/nav/achat/encastrable/four_classique/four_encastrable/oceanic_oceanic_fcn3b_four_electrique_encastrable_65l_nettoyage_manuel_b_noir_MK493784368.html">https://www.darty.com/nav/achat/encastrable/four_classique/four_encastrable/oceanic_oceanic_fcn3b_four_electrique_encastrable_65l_nettoyage_manuel_b_noir_MK493784368.html</a> )	Include the notion of basic electric ovens.

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69	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	431, 7.4.1	BM2 for gas ovens	“The comparison between electric and gas ovens is only valid if BM1.0 is used in both cases.” It is also possible to use BM2.0 for gas ovens. If not possible for this version of the regulation, it should be ready for the next revision.	Rephrase, taking into account that BM2 could be used for gas ovens in the next revision.
70	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	461-472, Table 156	Dissassembl able parts	The proposed measures on repairability could be better linked to the section on most common failures and lifetimes of cooking appliances (sections 4.4.3.1 and 4.4.3.2), and propose both an indicative list of easily disassemblable parts and a concrete timeframe during which these parts should be provided to end-users and/or professional repairers.	Link measures on repairability with sections on most common failures and propose list and timeframer for easily disassemblable parts
71	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	461-472, Table 156	Spare part price	The list of proposed policy should include a measure on maximum spare part price transparency, as per the proposal made in the context of the preparatory study on smartphones and tablets as an additional measure targeting affordability of repair options.	Include measure on maximum spare part price.
72	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	461-472, Table 156	Critical raw materials	The recommendation on recyclability should include mention of an information requirement on critical raw materials that may be present.	include mention of an information requirement on critical raw materials
73	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost	461-472, Table 156	Minimum recycled content	The list should include a recommendation on a possible measure mandating minimum post-consumer recycled material content	include a recommendation on a possible measure mandating minimum post-consumer recycled material content



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74	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	492, 7.8.2.7	Consumer expenditure	“In scenario Sc3b (50% of ovens sold are 50 litres) the consumer expenditure will be 3% lower than the BAU scenario. This is due to the reduced prices of smaller ovens and to their lower energy consumption“. We welcome this analysis. The flat approach should drive the sales of large ovens down and small ovens cost less and consume less.	No modification.
75	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	-	Health impact of induction hobs	The impact of induction on health has not been discussed. We would like this aspect to be addressed as it may inform the decision on e.g. how to set thresholds.	Include discussion on health impacts of induction hobs.
76	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	213, 4.1.4.1	Primary or final energy	Fig 159: Is the result given in primary or final energy consumption? If it is in primary energy, which conversion coefficient has been taken into account?	Specify if primary or final energy and what PEF has been used.
77	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	288, 5.1.2.4	Comparabil ity of base cases	The base cases for electric and gas hobs are not simply comparable (not the same test conditions).	Address the problem of comparability between electric and gas hobs base cases.
78	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost	288, Table 62	Energy consumption for induction hobs	Figures globally in line with values found in the French monitoring campaign Panel Elecdom in 100 households for energy consumption of induction and radiant hobs (only slightly lower figures in the review study).	Include reference to this source.

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79	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	380, 7.2.2	Energy labelling for hobs	“There is not sufficient differentiation among the products in the market to deploy an energy labelling measures”: But introducing an energy label could push toward innovation. Base case radiant 190Wh/cycle – base case induction: 185Wh/cycle – best induction technology: 170 Wh/cycle (11% difference). We would like to know what the extreme values are of the current hobs (EPREL database)? Is there really no interest to introduce an energy label?	Include data on extreme values from the EPREL database.
80	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	431, 7.5.1	Inclusion of hobs that work on 3 <sup>rd</sup> family gases	We welcome the proposal to include the “appliances which work with gases of the 3 <sup>rd</sup> family” in the scope of the regulation.	No modification.
81	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	431, 7.5.2	Energy label for hobs	An energy label classification is also important for consumers to be able to choose the most efficient product.	Take this consumer interest into account.
82	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	431, 7.5.2	Energy labelling for hobs	“Feasibility of energy labelling for hobs”: has the energy declared for current hobs been analyzed (for example data from the EPREL database) in order to make sure that there is indeed only small difference?	Include data on declared energy for current hobs in the analysis.
83	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost	433, 7.5.3	Lack of test method	Due to the lack of a common test method, it is not possible today to have common requirements for electric and gas hobs. We ask the EC to go toward a technology-neutral approach for all types of hobs for the next revision, i.e. ask the manufacturers to work together on a common test method.	Propose a standardisation request to develop technology neutral standards and regulation.

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84	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	253, 4.3.4.2	Distance to hood in standard	It is stated for the odour removal factor defined in EN61591, that since the test is performed at short distance between the hob and the hood, the capture efficiency is almost 100%. It is not correct that fume extractors in tests according to EN61591 are installed in a particular short distance above the hob. They are installed 600 mm above the hob, which is a normal distance for installation of fume extractors in kitchens, thus quite representative for normal use.	Change wording so that is no longer implies that the distance is unreasonable short.
85	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	258, 4.3.6	Grease filtering efficiency	It is stated that in terms of Grease Filtering Efficiency, it could only be concluded that under cabinet cooking fume extractors reach lower energy classes than the other models, although the sample is too small to reach any significant conclusion. There is no logical explanation for this conclusion from the geometry of the fume extractors, so it is most likely a result of small sample, possibly combined with the fact that the lowest prices fume extractors are mostly under cabinet types	Change wording so as to not imply that the geometry has significance for the result.
86	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	282, 4.5.3	Capture efficiency	It is stated that some stakeholders consider the current approach for measuring energy efficiency of cooking fume extractors not sufficient and that capture efficiency should be taken into account in some manner. This is supported by several findings in the report, for instance: <ul style="list-style-type: none"> <li>• On p.147 it is stated that Island mounted hoods, for instance, require greater exhaust airflow rate than wall mounted hoods</li> <li>• On p.148 it is stated that for same sized-hoods, increasing the front overhang significantly improves the hood's ability to capture and contain cooking pollutants. A similar thing happens with the rear gap. In Swierczyna et al, 2006, it was demonstrated that for the same front overhang, a deeper hood required less airflow to operate, since rear gap becomes smaller.</li> <li>• On p. 252, it is stated that regarding capture efficiency, one study (Dobbin et al ,2018) found that it can vary between 12% and 98% (using the study's definition of capture efficiency). We propose that capture efficiency it taken into account, but as standards are not developed for this, we propose to include the odour removal factor in the 9-point method.</li> </ul>	Consider taking capture efficiency into account through incorporation of odour factor.
87	ECOS- EEB- Coolpro	Carolina Koronen ,	293, 5.1.3.5	Product life time	A lifetime of 15 years is assumed for fume extractors. It is the same as for the product service life, why not 19 years as for ovens and hobs stated in table 54 on p.268?	Align product lifetime with ovens and hobs, at 19 years.

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88	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	299, 5.2.4.2	Price of fume extractors	It is stated a price of BC1 of 189.4€, but many fume extractors are sold at 130 € and lower.	Review the cost of BC1 and consider lowering it.
89	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	327, Table 88	Waste to landfill	Waste to landfill of production of 12.426 kg for one fume extractor. This seems very high.	Include an explanation for the very high number.
90	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	327, Table 88	Lifetime electricity use and emissions	5345 MJ of electricity use during lifetime only gives 124 kg CO <sub>2</sub> , equal to 84 g CO <sub>2</sub> /kWh. This is lower than current emissions of electricity.	Review the figure used for CO <sub>2</sub> eq/kWh electricity.
91	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	350, 6.3	Design options	Design options, including the option of changing to the 9-point method to support design optimisation. The current version of 9-point method as drafted by CEN TC59x WG13 is an improvement over the current method based on best efficiency point, but still does not give the optimal incentive for design improvements. One problem is that it includes a simple arithmetic average of fluid dynamic efficiencies (FDEs) at 3 realistic back-pressures, where the highest back-pressure with the highest fluid dynamic efficiency is dominating the result. As uses with duct systems with lower back-pressures are equally common, or maybe more common, the efficiencies at these back-pressures should have equal weight in the calculation of an average efficiency. This can be done with	Introduce weighing factors for different back-pressures.

					introduction of weighting factors for the three back-pressures, with the highest factor for the lowest back-pressure. We have developed proposals for weights based on existing market. As mentioned below, we also support to include odour removal as well as a penalty for high airflow.	
92	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	350, 6.3	Design options	Design options do not include optimisation of capture of fumes, in spite of several statements of the importance of the geometry of the fume extractor for capturing fumes in the report, see p.147, p.148, p. 252. We support the proposal as a short-term method to include the odour removal factor in the calculation of EEI, also for extraction fume extractors, as proposed by Denmark and Sweden. For a long-term method, a capture efficiency should be developed for inclusion in the EEI.	Consider the method for including odour removal proposed by Denmark and Sweden.
93	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	350, 6.3	Design options	Design options do not include a method to account for the heat loss from ventilation. We propose to compensate for this with a penalty factor for high airflow.	Consider heat recovery in design options.
94	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	350, 6.3	Design options	Design options do not include recirculating fume extractors. We would support inclusion of these as it will give designers an incentive to improve this type of fume extractor. The present odour removal factor can together with energy consumption be used to calculate an EEI for recirculating fume extractors. For models sold without a filter, manufacturers must specify a recommended standard filter. Such specifications would be useful guidance for consumers. For fume extractors that are made to be installed both in recirculation mode and in extraction mode, two labels should be shown to consumers.	Include recirculation fume extractors in the design options.
95	ECOS- EEB- Coolpro ducts- R2R	Carolina Koronen , carolina. koronen @ecost andard. org	350, 6.3	Design options	Design options do not include optimisation of one type a low power mode: permanent ventilation with low speed of the ventilator. This special kind of low power mode should be included in the label as a separate item (not as part of the A-G rating).	Take permanent ventilation mode into consideration in the design options.

96	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	351, 6.3	Design option 3	It is stated that design option (DO) 3 require a brushless motor. This is not correct, design option 3 is only an improvement of testing to incentivise optimised design.	Clarify that DO3 does not necessarily use a brushless motor.
97	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	373, Table 122	Price of design options	It is stated for BC1 that if an asynchronous shaded pole motor is replaced with an asynchronous capacitor motor (DO1), the price will increase from 189 € to 246 €, an increase of 57 €. On p.351 and in table 111 is stated that the extra costs of a capacitor motor is 5€. If the consumer price increase 2-4 times the manufacturing price, the increase shall be 10-20 €, not 57€. Similarly, it is stated that If an asynchronous shaded pole motor is replaced with a brushless motor (DO2), the price will increase from 189 € to 398 €, an increase of 209 €. On p.351 and in table 111 is stated that the extra costs of a brushless motor is 18€. If the consumer price increase 2-4 times the manufacturing price, the increase shall be 36-72 €, not 209€.	Correct the price of DO1 and DO2 so that it is consistent with the info in table 111 and a 2-4 times consumer price increase.
98	ECOS-EEB-Coolpro ducts-R2R	Carolina Koronen , carolina.koronen@ecostandard.org	374, Table 123	Price of design options	It is stated for BC2 if the default motor is replaced with a brushless motor (DO3), the price will increase from 334 € to 702 €, an increase of 368 €. In table 111 is stated that the extra costs of a brushless motor is 18€. If the consumer price increases 2-4 times the manufacturing price increase, the increase shall be 36-72 €, not 368€.	Correct the price of DO3 so that it is consistent with the info in table 111 and a 2-4 times consumer price increase.