



Input to the draft review study of the dishwasher Ecodesign and energy labelling regulations, Tasks 5-7

14 December 2015

Part I – Energy efficiency: Key topics and comments

1. Standard programme

Label programmes should be relevant for everyday use. Instead of showing the best case scenarios, the label must show a value as close as possible to an ‘average’ use. For dishwashers, this means that there should only be one ‘standard’ or ‘normal’ programme, which is used for declaration and suitable for most users.

We therefore recommend the following set of requirements related to the label and ecodesign programme:

- **The label programme should be named ‘standard’ or ‘normal’** (change needed in standard, but not regulations);
- It is **recommended for everyday use** in the booklet of instructions (no change needed);
- It is **clearly identifiable** on the programme selection device (no change needed);
- It is **set as the default** programme for DW’s with automatic programme selection (no change needed);
- **It does not need to be the most energy efficient programme** (deletion of current requirement);
- **There must not be any other general ‘standard’ or ‘normal’ programme** (new);
- **Programme duration should be declared on the label. A time cap could also be considered.**

With this set of requirements, the label programme should become the most used programme. A declaration of the programme duration could support a shift towards label programmes that are less optimised regarding energy efficiency, but have shorter duration and much higher acceptance. **Manufacturers would have to make trade-offs between energy efficiency/ consumption and programme duration.** The declared energy consumption of dishwashers might increase when these new rules apply, but the declared values would be more relevant for real life.

If the label programme is named ‘standard’ or ‘normal’, applying a time cap to this can be considered. (A time cap for a programme named ‘Eco’ makes no sense – as all other programmes without a time cap could be more energy efficient than the label programme.) Manufacturers would have the possibility to offer an ‘Eco’ programme with lower consumption thanks to longer duration or other slight disadvantages.

Today’s Ecodesign and Labelling regulations do not refer to an, ‘Eco’ programme, instead they state that the programme used for declaration must be named ‘standard’ programme¹:

¹ Dishwasher Ecodesign regulation, Annex I, 1. (1)

- (1) For the calculation of the energy consumption and other parameters for household dishwashers, the cycle which cleans normally soiled tableware (hereafter standard cleaning cycle) shall be used. This cycle shall be clearly identifiable on the programme selection device of the household dishwasher or the household dishwasher display, if any, or both, and named 'standard programme' and shall be set as the default cycle for household dishwashers equipped with automatic programme selection or any function for automatically selecting a cleaning programme or maintaining the selection of a programme.

Currently the study is not clear about this (e.g. page 87, first paragraph in 7.1.3.1). We ask the study team to correct the text, stating that there is currently a contradiction between the regulations and the measurement standard. We also want the study team to investigate why the regulations are not implemented in this regard, and make suggestions on how this contradiction can be eliminated, treating both alignment possibilities equally and assess the pros and cons for both.

We believe that the industry strategy to establish the 'Eco' programme as label programme can effectively undermine the energy label's credibility. This strategy aims at having one programme ('Eco') relevant for the label that, as its name implies, is optimised regarding energy efficiency, but not necessarily regarding other aspects such as user friendliness and acceptance. For users who do not have energy efficiency as their first priority, there is a 'normal' programme. This has a higher energy consumption than declared on the label, but is faster and – as the name says – is the programme that manufacturers are expecting most users to use. This dual-programme strategy (one for declaration, one for use) would be very convenient for manufacturers (no real trade-off necessary for label programme, very high efficiency and low consumption can be declared), but it undermines the energy label as a tool which brings transparency to the market, because in most cases the declared values have nothing to do with real life consumption. So far, dishwashers are the only product category for which the label is referring to the 'Eco' mode (in contradiction to the regulation). All other labels are aiming at an 'average' use. If not corrected, the case of dishwashers may even serve as an example for other product categories (e.g. washing machines).

2. Hot fill

For washing machines, 'hot fill' has been treated as a promising design option, but not for dishwashers. This is peculiar, as it is much easier to use this option for dishwashers than for washing machines (only one water inlet, nearly all models can be linked to hot water already today, installed in kitchen where hot water is already used and the tank is usually close). The Ecodesign regulation requires assessing the potential for 'hot water inlet'. Hot fill can have a high energy saving potential (50%), free of any additional cost. This saving potential should not be neglected, even if it does not solely depend on the dishwasher, but also on one or two additional aspects. **We ask the study team to treat hot fill as a serious option for dishwashers to be promoted with the energy label.**

Of course an explanation in which cases hot fill should be considered cannot be placed on the label. Instead **an icon on the label could simply show if the model is compatible with hot fill**, at the same time raising this issue towards consumers. **More information would have to be placed on the label fiche** or in the instructions booklet. A 'standard formulation' could be offered to manufacturers for use, while they would also be free to use their own formulation. An explanation could be as follows:

*This dishwasher model can be connected to hot instead of cold water ('hot fill'). If the hot water for your household is heated efficiently or with renewable energies, this can save you up to 50% of energy. It is recommended to consider hot fill for your dishwasher if the hot water for your household is heated with solar energy, wood, natural gas, a heat pump water heater or by district heating. Your dishwasher should be placed no more than 5 meters from your hot water storage tank. The shorter the pipe between your dishwasher and hot water storage tank, the lower your energy bill will be.
You can ask your installer/ plumber to assess this option for your household.*

In Switzerland, manufacturers already state if each model can safely be linked to hot water (nearly all models can).

3. Including learning curves

Applied by the US Department of Energy, and currently mentioned in the Ecodesign methodology for new preparatory studies, the use of learning curves when predicting future cost benefits allows to 'account for price and efficiency effects of technological learning in the period between data recording and a regulation taking effect' (Ecofys, 2014). It is currently partly missing. We invite the study team to apply this methodology and thereby reach cost estimations that are closer to reality and allows for more effective policy measures. We understand that the data on costs is scarce, as is data on future development. We recommend assuming a constant cost reduction rate of a few percent per year for each option.

4. New MEPS should be seriously considered

Today's most efficient product consumes 53% less energy than the MEPS level A+ (see <http://www.topten.eu/english/household/dishwashers/built-in-2.html>). These large efficiency differences do not only ask for a new label scale, but obviously also leave ample space for new MEPS. The LCC calculations show that there are design option combinations with lower life cycle costs than the base case – if learning curves are applied, the differences will be greater. Additionally the base case for the 13 ps model is already an A++ model. Compared to today's MEPS level A+, improved dishwashers will bring greater life cycle cost reductions than the 6% that have been calculated.

If the label scale and the SAEC are updated, new MEPS are easily possible while still keeping a minimum number of classes on the market (see below).

The argument used in the study, that all A+ products are already good and that therefore no new MEPS are needed, is very simplistic. We are asking the study team to seriously assess the introduction of new MEPS.

5. Standard energy consumption needs to be updated

The standard annual energy consumption (SAEC) that is used for calculating the energy efficiency index (EEI) is outdated: for a 13 ps model it is 469 kWh/year, while the least efficient, yet allowed on the market (A+) can use no more than 295 kWh/year. Defining a future label scale (and MEPS) needs an updated SAEC, corresponding to an average model ('standard consumption' should reflect the average) or at least to today's MEPS – regardless of if the future efficiency is calculated on a per cycle basis or not.

The label scale then needs to be shifted to represent an EEI of 100 at the SAEC level. The table below shows as an example how the new label scale could look like: for this example the MEPS level was left where it is today, and today's BAT model was placed in class B. For the 'new EEI' the SAEC was placed at the MEPS level (today's A+). Each class is representing an improvement of 13% (based on the new EEI).

Example for new label scale with EEI based on updated SAEC.

Class	Today's EEI	New EEI
A	30	43
B	34	50
C	39	57
D	44	66
E	50	76
F	56	87
G	63	100

The table also shows that it is easily feasible to introduce new MEPS and still have enough classes.

6. Standby

We welcome the fact that the study team is assessing power caps for delayed-start and left-on modes in the study. From the definitions in the standby regulation 1275/2008 we understand that these modes should already be covered:

1. Standby is a mode that 'may persist for an indefinite time', and is providing a reactivation function, including by 'timer'. -> Delayed-start function should be covered.

2. The power management requirement says that when the product is not providing the main function, the product should switch after the shortest possible of time for the intended use into off, standby or any mode complying with the power limits. -> The left-on mode should be very short or be equivalent to standby / off mode).

Power caps for these modes, no matter if defined in the horizontal or vertical regulation, should be the same as for 'normal' standby / off mode.

7. Tolerances

The ecodesign and energy label regulations are asking for an assessment of the verification tolerances. We ask the study team to assess the possibility of removing tolerances, as it is common in the US. Also for the noise emission verification according to the energy label, there is no tolerance today. Manufacturers would have to include uncertainties into their declarations and declare all values 'on the safe side' for all aspects.

Part II – Material efficiency & end-of-life aspects

On 2 December 2015, the European Commission launched its Communication "Closing the loop - An EU action plan for the Circular Economy". As a first measure the Commission announced to put more emphasis on circular economy aspects in future product requirements under the Ecodesign directive from 2016 onwards. As objectives of this work it states that better design can make products more durable or easier to repair, upgrade or remanufacture. It can help recyclers to disassemble products in order to recover valuable materials and components. Overall, it can help save precious resources.

We expect that the ongoing Ecodesign studies for white goods take these considerations into account when presenting their findings and conclusions on material efficiency and end-of-life aspects. In this context, we stress the argument made in the common position paper from the EEB, ECOS, RREUSE and the Coolproducts Campaign of August 2015. In the light of the discussions held during the second stakeholder meetings in November 2016 and the draft task 6 and 7 reports, we would like to reiterate the following points and strongly recommend the study team to integrate some further analysis on these issues in the final reports:

1. Suggest a procedure to prove non-destructive disassembly & re-assembly as a precondition for improving reparability

In our original response to the questionnaires in May 2015 we included evidence from the RREUSE network of which key components and parts need to be accessible (neither glued nor welded) in order to repair or replace them. At a minimum, we expect the study team to investigate an equivalent information requirement as was implemented for vacuum cleaners: *"The technical documentation and a part for professionals of the free access websites of manufacturers, their authorised representatives, or importers shall contain the following elements: information relevant for non-destructive disassembly for maintenance purposes, in particular in relation to the hose, suction inlet, motor, casing and cable."*

2. Information on the availability of spare parts and repair manuals should be indicated not only on the website but also at the Point of Sale

In the draft task 7 reports, a proposal on “basis reparability grades” was mentioned as one of the policy options related to material efficiency and end-of-life. We would like to express our support that this kind of information, or even warning (if neither spare parts nor repair manuals are being made available), should be communicated e.g. in association with the label. The second best option would be on the packaging or on the product fiche, in order to be handed over on request with internet links where to order spare parts and to download the repair manual.

3. Provision of end-of-life information for recyclers in a standardised format

A recent study by the JRC concludes that the resource efficiency of dishwashers could be significantly improved by the extraction of key parts before any non-specific shredding treatment takes place. The latter could result in the contamination of other recyclable parts, lower recycling rates e.g. for steel, copper, gold, silver, and platinum-group metals (PGMs) or eliminating the possibility for recovery of Critical Raw Materials (CRM, e.g. Indium).

Therefore, we suggest including the following requirements as policy options:

- Ensure separate extraction/ treatment of PCBs - if not manually feasible, it should be mentioned which recycling process should be used to get those separated;
- Allow only for a single polymer or recyclable polymer blend for plastic parts above 25g and marking different plastic pieces in alignment with the provisions foreseen in the Ecodesign regulation for electronic displays;
- Provide information in the product fiche of the SVHC as required by art 33 REACH.

Such Ecodesign requirements could increase the consistency on how obligations to inform recyclers stipulated in different EU directives (REACH art 33, WEEE art 15 etc) are actually being implemented in a harmonised and legally binding way.

4. Mentioning the full warranty time on the Energy label

This kind of information should cover the whole period during which consumers or customers can have the product changed or repaired without any further burden of proof.