

## **Ecodesign Preparatory Study DG ENER Lot 24: Professional washing machines, dryers and dishwashers Minutes of the First Stakeholder Meeting on Laundry appliances**

**Place:** BIO Intelligence Service  
20-22 Villa Deshayes, 75014 Paris

**Date / Time:** October 1<sup>st</sup>, 2010  
10h00 – 16h30

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## Agenda:

10:00 – 10:15	Welcome of participants and “tour de table”
10:15 – 10:30	Introduction and Scope of the Meeting
10:30 – 11:45	Presentation and discussion of Task 1 (Definition)
11:45 – 12:45	Presentation and discussion of Task 2 (Market Analysis)
12:45 – 14:00	<i>Lunch break</i>
14:00 – 15:30	Draft presentation (current status) and discussion of Task 3 (Consumer Behaviour) and Task 4 (Technical Analysis)
15:30 – 16:00	Discussion of first considerations regarding Base Cases (Task 5)
16:00 – 16:30	Next steps, schedule and final stakeholder meeting
16:30 – 16:45	Any other business
16:45	End of meeting

*The times of the agenda are the originally planned times, and may not reflect the reality of the events that occurred.*

**Annex:** Stakeholders who read these minutes should also consult the powerpoint presentations of the meeting that are available on the project website ([www.ecowet-commercial.org](http://www.ecowet-commercial.org)).

## Participants:

### European Commission

*AC*      Alix Chambris      EC – DG ENER

### Lot 2 consortium

*CG*      Carl-Otto Gensch      Öko-Institut

*MB*      Markus Blepp      Öko-Institut

*SM*      Shailendra Mudgal      BIO Intelligence Service

*LL*      Lorcan Lyons      BIO Intelligence Service

*TF*      Thibault Faninger      BIO Intelligence Service

*RC*      Raul Cervantes      BIO Intelligence Service

### Stakeholders

*SA*      Sten-Hakan Almström      CENELEC/Electrolux Laundry Systems

*JK*      Jørgen Kjeldgaard      Danish Technological Institute

*HJ*      Hans Jager      ECOS

*LO*      Lars Örnholmer      Electrolux Laundry Systems

*VC*      Vincent Cornillon      GDF Suez

*BM*      Bernd Michalik      Herbert Kannegiesser GmbH

*MK*      Marco Kirschner      Jensen GmbH

*JS*      Jürgen Schäfer      Miele & Cie KG

*DK*      Daniel Kopriva      Primus CE

*MJ*      Milan Janicek      Primus CE

*RN*      Rita Neumann      VDMA

*CR*      Christian Rotter      Veit GmbH

*DF*      Daniel Flicos      Xeros Limited

## 1. INTRODUCTION

CG welcomed participants to the meeting and presented the agenda. CG directed the “tour de table”.

## 2. TASK 1

MB presented the results of Task 1.

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### *Comments during the presentation*

RN commented that one of the standards presented in Task 1, ISO 9398, is not applicable for professional equipment. Therefore, it is not relevant to the study. She also pointed out that this standard is very old, and although it has been submitted several times under the withdrawing process, some industrial representatives might still use it currently.

JS referred to the existence of an online Energy Star product list.

AC inquired about the process of environmental labelling as a public procurement tool overseas. SA answered that this is applicable to domestic and professional equipment.

As a side note, AC mentioned the forthcoming publication of Energy Star labelling program on household dishwashers and washing machines labelling. This publication is scheduled for the coming months.

RN requested the source of classification for professional equipment (from 8 to 120kg). According to RN, 120kg equipment seems too big and unrealistically classified as “professional”. SA answered RN by saying that all machines are professional equipment. The so-called “industrial” machines refer instead to the end-use sector and are technically the same, but can have higher capacities.

SA made a presentation<sup>1</sup> on the work of CENELEC Technical Committee 59-X on washing machines. SA stressed the need to define a clear terminology and mentioned that possible standards should be related to machine use (market segment), instead of machine capacities, in order to be relevant. He also presented a classification dividing equipment into domestic and professional (and semi-professional) machines on the one hand, and dividing the market segments into domestic and commercial on the other hand (the term “industrial” is not used in this classification). SA concluded that the segmentation of the market should follow the use of the equipment instead of the size.

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### *Discussing Task 1 (led by MB)*

#### *Classification*

MB opened the discussion with the slide on classification (#42). BM commented that coin and card, hospitality and healthcare are commercial sectors, although it is possible to find heavy duty equipment. Healthcare is the most difficult sector to define, since the market is very mixed. In industrial applications

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<sup>1</sup> Available on the project website

however, it is possible to find small machines. JS made a differentiation in the healthcare sector between the hospital sector and the nursing sector, and remarked that the hospital sector is more like an industrial sector while the nursing area uses machines with lower capacities. SA thought that market segment #4 (commercial industrial laundry and high-tech laundry) should not be a single category. High-tech laundry can include very small parts that do not fit in the industrial sector.

### *Performance*

Regarding slide #43 (performance of professional laundry machines) on standards, MB asked for feedback on these. SA said that although the method for measuring energy performance of different size machines should be the same, it is different now and require a compromise. CG mentioned that ISO 9398 is not being used and asked the opinion of stakeholders about the reasons it has not been withdrawn. SA answered that this standard is applicable for domestic machines, but not for professional ones. RN remarked that ISO standards are worldwide, and that there have been some requests to deal with this issue but with very few answers, hence the standard is kept. A majority of countries would need to agree on its removal. AC asked what standard is used in the United States (ISO ones?). AS replied that the United States use its own standards, ASTM, for energy labelling. RN commented that around three years ago the area of application of ISO 10472 was to be clarified, but CENELEC representatives and electrical sector ones demanded to keep it the way it was. AC asked the reason why the water consumption standard (safety standard) is not used. MJ said that the safety standard mentioned by AC requires a standard programme that no manufacturer would use. This implies that it will not be really comparable as some machines are fully programmable. RN translated BM: regarding industrial laundry, users only compare behaviour through the consumption of energy (fuel) in any programme decided by them and not in a standard programme that would be valid for all product categories. MJ added that the choice of programme is related to the choice of detergent.

MB asked for comments about national legislation (referred in slide #44). SA mentioned that national legislation is being developed locally, e.g. a tumble dryer standard in Switzerland. BM commented that the requirements for the Energy Star are being changed but only regarding the testing methodology.

### *Professional vs. Industrial laundry appliances*

During the discussion of professional versus industrial laundry appliances (slide #46), SA stated his position that industrial is a market segment, and that professional in that case is a type of equipment. CG asked the opinion of other stakeholders who did not agree with this position. RN mentioned that this discussion has been ongoing for about 40 years, and the problem is including new equipment in an already big classification tree. BM considered that capacity of 20kg (coin laundry or something else) is very difficult to classify, since these machines could be a mix; in hospitality it is possible to find everything, machines from 30kg to 120/140/160kg or even machines of 20kg. SA asked what is the difference between two machines considered as professional and industrial having the same capacity of 40 kg. MK answered that in industrial machines the process is open. SA explained that in a hypothetical situation where requirements were set for professional machines and not for 'industrial' ones, professional machines could be replaced by 'industrial' ones in some cases. JS added that 'industrial' appliances are freely programmable. BM mentioned that when the machines are sold, they are customised machines, making differences in the consumption of water, detergent or energy. MK commented that the number of units sold could solve the boundary issues between professional and industrial use.

### *Exclusions*

The exclusion slide (#47) was presented by MB. AS opened the discussion saying washer dryers were left out of the scope of the study on household machines, due to the limited number of machines and this might be the same for this study. AC replied saying that doing that would delay the implementation measures as it will take longer to make an additional study. AS added that since the amount of washer dryers could be 1/10<sup>th</sup> of the other categories, developing a standard for this would represent high cost. AC asked what would be the consequence of not considering mechanical extractor machines, since it would affect the overall performance of other machines. AS suggested that those are machines on their own. AC insisted that a machine with integrated extraction would use more energy than a machine without this feature, but using an additional mechanical extractor, having an overall higher consumption. JS stated that machines with integrated extractors consume more energy. AS explained that there will be more moisture in the water, the extractor is completely independent, and thus there is very little scope to optimise its functionality, and there are not many of them in the market. AC asked if in terms of energy consumption it would be less expensive to wash in a washing machine and then use an extractor. According to AS this would be, in principle, the same but more labour-intensive. MJ said that the extraction of the water is included in the process and should be taken into account. BM said that in Europe heavy duty machines use hydro-extractors. MK expressed the view that extraction units are needed for tunnel machines of the heavy industrial type. The exemption of these machines was suggested by stakeholders.

RN mentioned that VDMA sent a brief comment document to CENELEC, but it has not been possible to send the document to ISO.

CG stated that it will not be possible to have a distinction between industrial and commercial sectors. AS position is that “industrial appliance” should be substituted by “industrial segment”. RN commented that CENELEC does not have the technical expertise to evaluate this, although it was tried three or four years ago at meetings.

### *Categories*

Regarding the classification (slide #49), AS thought that “up to 7 kg” machines should be removed from WM1, since in the future that measure could easily change. Also, WM6 should not be a separate category as some of them are included in WM2 and WM3 (same machines, different sizes). AS and BM agreed that the relevant classification will depend on the installed stock and market sales. CG asked if there is agreement on the proposal. BM and RN (VDMA) did not agree with this proposal. TF asked about the situation of D6, considering the issue of WM6. AS replied that D6 can be treated similarly to continuous tunnel washers, i.e. different design, and separately (system approach as a batch dryer cannot be fed manually).

## **TASK 2**

TF made a presentation on the current results of task 2.

RN mentioned that the amount of washing machines and dryers does not reach the 200 000 units sold per year, stated by the Directive. TF, SM and LL explained that this is an indicative number for the entire product group of the Lot, and that the environmental impacts of the products should also be taken into account to assess the relevance to a preparatory study.

Regarding indirect employment figures, SA suggested to look at employment figures of commercial laundry facilities if available. This would represent a large amount of people, probably similar to the

number of installed stock. TF replied that the figure currently shown in the presentation only accounts for direct employment, i.e. people employed in manufacturing companies. SM added that the reason for considering employment figures is to know the impact on the industry if any regulation is applied.

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*TF opened the discussion on Task 2*

#### *Market data*

SA commented on the lack of reliability of Prodcum data. SA mentioned that exports are probably more than 15%, maybe up to 30% but with great uncertainty. MK claimed that for heavy duty it is probably even more, around 35%. TF asked whether the current import estimation was too low. AC asked if the situation is similar to that of the household sector, for which a lot of the production is based in Turkey. JS mentioned that there is not a lot of production in Turkey. JS asked if the regulations were to apply to production sites of European manufacturers not in the EU. TF replied that all products on the EU market (including imported ones from EU or non-EU manufacturers) would be concerned.

TF explained that exclusion of products from the scope is not only based on the amount of units sold/installed, but also the environmental impacts of these machines. There are no solid arguments to exclude WM6; however due to the technical complexity of WM7, these are more likely to be excluded. TF gave the example of dishwashers, and opened the discussion regarding the sales. BM commented that in the EU market, there may be 240-280 tunnel washing machines. MK said that the figure for WM6 (1 700 units sold) is overestimated. There should be 4-5 batch dryers for 1 tunnel washing machines. BM agreed that WM6 sales should be lower than 1 000 units annually. JS mentioned that “machines between 8 and 40kg” is not relevant as a category, as machines over 25kg only represent around 20% of the market. SA considered that the classification should start with “below 40kg”, applicable for all other categories (semi-professional/professional washer extractor, etc.). TF inquired about the relationship between classification and use, remarking that from the technical point of view, WM1, WM2, WM3 and WM6 are similar. SA answered that these could be similar depending on the category and this might be also applied to WM5.

#### *Use by sector*

SA mentioned that the figures presented (market shares by market segments) on slide 14 are too low for “coin and card” and too high for “hospitality” users. These figures should be reviewed. This was agreed by JS. TF asked if all six categories should be kept. BM answered no, based on the need for a distinction between industrial and professional in capacity terms. TF asked if categories should be fixed according to size, keeping size limits: for professional appliances, under and over 40kg. JS has a problem with that, as definitions could change in time. SA suggested having professional washing machines from 0 to 15kg, then from 15 to 40kg and above 40kg; segment use and figures would change accordingly. For semi-professional equipment, no upper limit of capacity should be set. SA and JS agreed that regulations should consider the use of the equipment, and function should be the priority (e.g. the hygienic requirement for the hospitality sector). SA suggested taking transfer dryers out of the scope. This suggestion was supported by JS due to the small number of units. TF mentioned that these are machines working independently, and that there should be a way to study them. MK commented that tunnel washers and transfer dryers are connected and that transfer dryers cannot be fed manually. SA proposed having an extra category to be studied separately in the report to analyse the system “continuous tunnel washing machine + batch dryer”. JS considered that as a good approach.

According to SA, the sale percentages per segment are not correct. He thought it is possible to have percentage values but not actual numbers. JS said that the segmentation should be changed. SA commented that “industrial” and “high-tech” should not be together.

### *Lifetime*

TF asked about lifetimes but there were no comments. TF invited stakeholders to send other possible comments using the template available on the website. Regarding maintenance, HJ did not see that a maintenance figure of only 3% was possible, unless it was included in a service contract, including the cost. TF asked for estimations from manufacturers as a percentage of the price. Stakeholders considered it possible to provide this percentage in response to a new inquiry from the project team.

As an additional comment, SA mentioned the importance of dealing with tumble dryers, as they use 3-4 times more energy than washing machines. Also, he pointed that the market trend for detergent working at lower temperatures leads to energy savings by itself, without changing the machines (referring to household machines). MJ commented that this is the same for industrial machines. JS mentioned that the difference of energy consumption between washing machines and dryers is a bit less important for heavy duty appliances as other heating options which are more efficient (gas, steam) are available. AC asked whether changes in technology enabled energy consumption to decrease from 30 to 40% in the past 10 years (task 2 figure). SA answered that this decrease could instead be explained by a decrease in water temperature (from 90°C to 60°C to 40°C) due to new user behaviour. JS said that user behaviour has changed, inducing to less energy consumption, as evidenced by the use of chemicals instead of hot water for killing bacteria, for instance. AC asked why water consumption has decreased as well. JS mentioned that washing habits have changed in the past 10 to 20 years so that the user is also the main reason for the diminishing consumption of water. The water consumption could be decreased even further, but this could negatively affect customer perception of performance, meaning fewer sales. In the case of households, MJ said that these reductions can lead to longer cycles, acceptable for household machines but not for professional ones. MJ also mentioned that another reason for the water consumption decrease can be the reduction of rinses or other options already in place. SA said that these improvements lead to lower running costs.

## **TASK 3**

*MB presented the results of Task 3. Most of the discussion took place during the presentation.*

CG explained that user behaviour can help to define the energy use of the machines. AC gave an example of household machines, where extra requirements are demanded based on user behaviour analysis. SA mentioned that the operators of the machines are often the reason for decreases in efficiency. CG asked the opinion of stakeholders whether the number of cycles or the operating hours in the year was more accurate. JS answered that operating hours would be best, based on the type of equipment. MJ mentioned that there is a difference between using direct or indirect heating sources, and that this would influence the energy consumption. TF explained that the EcoReport energy inputs include electricity and heat power input. JK added that the location of the machines is very important in terms of pollution, since they can produce thermal pollution to water reservoirs. SA wondered whether smaller machines using natural gas to heat water really existed. Therefore two columns of the table presented should be combined. SA and JS agreed that in warm water supply it should be 100% instead of 5%. JK referred to the ways of providing energy, and standard conversion factors for gas to electricity; in household machines, labeling refers to energy use irrespective of the source the energy (waste material

or other sources). TF answered that this is related to the environmental analysis to be done, the different inputs to the EcoReport and the options given in the tool, considering the source of energy. SA asked for the source of data for this analysis. TF answered that the production of electricity in EcoReport comes from a European mix that was defined within the EuP methodology. SM added that the mix remains the same between all preparatory studies in order to allow relevant comparisons between the results of the different Lots.

## TASK 4

*MB presented Task 4.*

SA highlighted the impact of the detergent. CG asked what the influence of the machine performance on the textile degradation is. SA answered that textile lifetimes are not determined by the machine manufacturer, but by the type of detergent or cycle selected by the user; in principle it is possible to use the appropriate programme. AC asked whether this parameter was presented by SA during his CENELEC presentation. SA replied that it is not relevant for washing machines; damage to textiles is frequently caused by users as the machines are fully programmable, and there is a trade-off with cleaning performance. Regarding the temperature, JK mentioned the importance for the users to choose the temperature profile desired. However, for JS this issue might only be important in machines requiring sanitation, and this function can be replaced by chemical products. AC asked for the temperature discussion to be considered during the standard-making discussion. MJ said that these machines are fully programmable and their correct use is partially the responsibility of qualified users. AC mentioned the importance of testing temperature and other parameters for the benefit of users. SA mentioned that CENELEC discussions have taken a long time to define the testing methods for the main performance parameters: for the cleaning performance, they managed to define it; for sanitation, after six years of discussion nothing is defined yet; for spinning it is OK; for rinsing performance there is no solution on how to measure it in a good way. He added that if a cycle is claimed to have a specific sanitation performance, the temperature is a factor to be claimed and guaranteed; otherwise it is not really an issue. SM mentioned that in several Ecodesign projects, there is a lack of standards, so the regulation is not fixed but is expected to evolve in time through revisions for adaptation. CG concluded for the subsection the need for points of reference for detergent and temperature in standards.

SA said that garments can be labelled according to materials (cotton 60, 40, etc), and then there will be a programme that is suitable for them and they shouldn't be cleaned using another programme; that is the reason for having well-identified programmes; sanitation plays a less important role than keeping the garments in good condition. He also asked the reason for going back to 30°C cycles. JS commented that these issues are not related to commercial, but domestic machines. He added that one approach is to save energy while being clear to the customer of each segment (and their specific needs); according to him, the result of the study should be a clear definition of the saving performance that can be achieved in the future while satisfying the end-users. CG recommended leaving the temperature discussion for working groups. JK mentioned that determining what is expected of washing machines is important, as from a "washing machine" sanitation could be expected, determining the conditions of measurement.

## EXTRA DISCUSSION

- Task 3 and 4 to be published after an updated short inquiry

- Final stakeholder meeting to be agreed (likely to be on 14<sup>th</sup> December), allowing for reading time and tight schedule in December