

**1<sup>st</sup> TWG meeting for the development of a MEErP preparatory study on  
Taps and Showers**

**Tuesday 29 October 2013, 9:30 – 17:30**

**IPTS (Institute for Prospective Technological Studies)**

**Edificio Expo, C/ Inca Garcilaso, 3**

**Room A30**

**41 092 Seville, SPAIN**

**Agenda**

<b>1.</b>	Opening and welcome	<b>9:30 – 9:45</b>
<b>2.</b>	Political framework and potential outcomes of the project	<b>9:45 - 10:00</b>
<b>3.</b>	Timeline and status of the study on Taps and Showers	<b>10:00 – 10:15</b>
<b>4.</b>	Task 1 – Scope and definitions: definitions, legislation and standards	<b>10:15 – 11:00</b>
	Coffee break	<b>11:00 – 11:15</b>
<b>5.</b>	Task 2 – Market analysis	<b>11:15 – 12:00</b>
<b>6.</b>	Task 3 - User and system aspects	<b>12:00 – 13:00</b>
	Lunch break	<b>13:00 – 14:30</b>
<b>7.</b>	Task 4 – Technologies	<b>14:30 – 15:15</b>
<b>8.</b>	Task 5 – Preliminary environmental assessment	<b>15:15 – 16:00</b>
	Coffee break	<b>16:00 – 16:15</b>
<b>8.</b>	Synthesis and potential results from previous tasks	<b>16:15 – 16:45</b>
<b>9.</b>	Next steps and planning	<b>16:45 – 17:15</b>
<b>10.</b>	Any other business and conclusion of the meeting	<b>17:15 – 17:30</b>

## List of participants

First Name	Last Name	Organisation	Country
Belen	Bailera	APPLUS	Spain
Christophe	Bochaton	PROFLUID / CEIR	France
Maria	Calero Pastor	European Commission, JRC-IES	Italy
Mauro	Cordella	European Commission, JRC-IPTS	Spain
Rose	Derwort	Kiwa Netherlands B.V.	Netherlands
Gustavo	Diez	Prestoiberica	Spain
Ralf	Donell	Ideal Standard Produktions GmbH	Germany
Peter	Eder	European Commission, JRC-IPTS	Spain
Elena	Garbarino	European Commission, JRC-IPTS	Spain
Anders	Hallberg	Swedish Energy Agency	Sweden
Jan-Patrick	Harms	HKI Industrial Association	Belgium
Werner	Heinzelmann	Hansgrohe AG	Germany
Carlos	Iriarte	Roca Sanitario	Spain
Vassil	Kanev	Ideal Standard International	Brussels
Malgorzata	Kowalska	European Commission, JRC-IPTS	Spain
Gérard	Le Clanche	VERNET SAS	France
Laurent	Loiseleux	Kohler France	France
Alessandro	Maggioni	ANIMA – Federazione delle Associazioni Nazionali dell'Industria Meccanica Varia ed Affine	Italy
Sílvia	Menezes	DECO Proteste	Portugal
Belmira	Neto	European Commission, JRC-IPTS	Spain
Yvonne	Orgill	Bathroom Manufacturers Association	United Kingdom
Ferenc	Pekar	European Commission, DG-ENV	Belgium
Carla	Pimentel-Rodrigues	ANQIP	Portugal
Rocio	Rodriguez Quintero	European Commission, JRC-IPTS	Spain
Laurent	Rousseau	CSTB	France
Jörg	Rudolph	NEOPERL GmbH	Germany
Armando	Silva Afonso	ANQIP	Portugal
Christian	Taylor-Hamlin	Bathroom Manufacturers Association	United Kingdom
Hartmut	Tembrink	VDMA	Germany
Rob	van Deursen	Kiwa N.V.	Netherlands
Bizhan	Zhumagali	ICF International	Belgium

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## **Agenda Point 1. Opening and welcome**

After welcoming all the participants and asking them to introduce briefly themselves, the Commission outlined the topics to be discussed during the day.

## **Agenda Point 2. Political framework and potential outcomes of the project**

The Commission provided information on the political framework and on the potential outcomes/policy options for this preparatory study. In particular, the Commission introduced key policies on 'water-related products', examples of existing product policy tools (e.g. the EU Ecolabel/GPP for sanitary tapware, possible Ecodesign measures and resource efficiency labelling for energy and other resources). Stakeholders were informed that the implementation of any product policy instruments, based on the outcomes of this study will require the set-up of a consultation process, as usual for the development of Ecodesign/Labelling measures.

## **Agenda Point 3. Timeline and status of the study on Taps and Showers**

The Commission pointed out that the main objective of the study is the development of an evidence base to prepare the potential integrated implementation of SPP for taps and showers, following the MEErP methodology. An overview of the different tasks of the study was presented, with particular reference to milestones, methods for collecting information, material presented in the meeting and next steps of the study. The study is expected to be completed by July 2014. At that stage it will be decided which policy tools to implement and a consultation process will be set-up which could be completed in 1 year.

A stakeholder considered that this is a very ambitious schedule, taking into consideration that some Ecodesign projects can last up to 5 years or more. Although the implementation process could depend on many circumstances, the Commission ensured that the time schedule is ambitious but realistic.

## **Agenda Point 4. Task 1 – Scope and definitions: definitions, legislation and standards**

The Commission presented the elements collected for Task 1, including information on:

- Product definitions and classifications;
- Measurements methods and standards;
- Legislation, voluntary agreements and labels;
- Potential barriers to producers.

A stakeholder asked why only the Water Label and the Water Efficiency Label (WELL) have been mentioned in the presentation. The Commission replied that only the most relevant labeling schemes aiming at covering the European market have been indicated, even it is known that there are many other voluntary labels at MS and extra-EU level.

The definition of shower / shower system opened some points of discussion.

Some stakeholders did not fully agree on the definition provided. The market of showers is quite heterogeneous and it includes different selling options. Showers can be sold as one product system (including outlet, valve and hose) or installed after buying single components separately. For instance, it was reported that showerheads are usually sold separately from the valves and hoses in France, where sales of shower systems is about 0.5% of the market. In other countries showers are more typically sold as a system.

It was also pointed out that a shower systems does not include necessarily a mixing valve, being the case this can be a normal valve, for instance in swimming pools. Some stakeholders raised the attention to the fact that there are shower systems with one or more outlets.

The Commission replied that even though valves and hoses can be sold separately, a "shower" was considered as a system, according to what was discussed in the KO meeting of Barcelona. Along the report a shower is considered as a shower system. The same assumption on shower (systems) was proposed for the market analysis. A clearer definition of showers and shower systems is necessary and the report shall be reworded consequently. The Commission suggested discussing on this issue during the presentation of Task 2.

It was suggested to clearly defining also what showers, shower systems, showerheads and hand-showers are. A stakeholder suggested referring to the definitions used in the EU Ecolabel criteria document.

The Commission invited stakeholders to provide technical support after the meeting in order to clarify and improve the definition of shower / shower system and to have an idea of the market shares at European level.

It was underlined that getting sound information for the whole EU is a challenging task and that, within this preparatory study, definitions are not the key issue but still deserve some improvement because a clearer distinction between products will be necessary for the implementation of policy instruments.

Stakeholders also provided input with respect to the identification of specific categories of products that form a niche market or that are not relevant for water-energy saving:

- pre-rinse units should refer to both commercial and industrial applications
- instant hot-water dispensers are already covered in other ecodesign studies

A longer discussion took place for the definition for wellness and luxury showers. According to stakeholders, it is difficult to define luxury showers and impossible to define what is wellness. Moreover, the showerhead diameter did not seem a good parameter for defining this kind of showers. It was suggested to make a distinction between luxury and wellness showers. The definition of wellness appears a grey-zone. Many products can carry claims about their health benefits without the possibility to verify them. A possibility could be to differentiate between use of the product with and without medical prescription. However, this does not seem an option that can be followed. Other stakeholders believe that it is not possible to prohibit people from using wellness products and that this is a political decision.

The Commission agreed with stakeholders but underlined the importance of having solid technical definitions with which to base any decisions related to the implementation of ecodesign measures for some products and/or the labelling of products. About this topic, a stakeholder said that applying ecodesign measures only to some products could create confusion to the consumers and that labelling of all the products is the right choice.

Summarizing the discussion, the Commission indicated that it does not seem reasonable to exclude wellness showers from the scope of the study. However, additional input is needed from industry in order to identify technical parameters that can be used for defining these products.

The last part of the discussion concerned the information on standards. Stakeholders suggested to include the standard EN 816 on automatic shut-off valves and reported that automatic valves should be included also for showers. A clarification on standards EN1111 and EN 1112 for low pressure and high pressure systems was proposed: both include safety issues and have to be applied together. With reference to noise, it was indicated that there are more standards available on this topic in addition to those listed within the draft report. More standards are available also for functional performance parameters. Standards on AI and AI-alloys are considered not relevant for the study.

The Commission explained also that the draft report is focused on standards at EU level and that the information reported has been collected by means of two questionnaires. New information is welcomed, but this should focus on the most relevant standards and legislation for the EU. Additional national and extra-EU information will be put in annex in the final version of the report.

## Agenda Point 5. Task 2 – Market analysis

The Commission presented the elements collected for Task 2, including information on:

- EU production and trade volume (official statistics)
- Market and stock data (model)
- Market structure and trends
- Consumer expenditure and base data

The discussion on the definition of showers was continued also including the implications on the market analysis. A stakeholder indicated that, differently from shower valves, showerheads are not necessarily included in PRODCOM since shower valves can be sold separately from the showerheads and hoses. It was suggested to differentiate between what is actually installed and what is sold because the assumptions made can be accepted for the stock but not for the market. It was suggested to consider that the lifetime of a shower system is shorter than the lifetime of a valve and to make definitions clear along the report clear to understand when reference is on shower valve, outlet or system. The Commission assumed that for each shower valve there is a showerhead and remembered that simplified assumptions have to be done if better information is not available. In order to create a more accurate and precise model, input from stakeholders on market segmentation, installed stock and substitution rate would be needed.

A stakeholder supported the work done by JRC underlining that in the KO meeting of Barcelona it was agreed that a shower system is composed by a valve and an outlet. It was also pointed out that the proposed ratio 5.7:1 between taps and showers appears acceptable and that the presented market analysis is probably a reasonable simplification of the reality.

Stakeholders also reported that 20% of dwellings in the UK are not equipped with showers. This would correspond to the share of pillar taps. Additionally, it was suggested to consider number of houses and not the population when making market/stock estimations because otherwise the saving potential could be over-estimated. Some stakeholders underlined that water and energy is used and saved by persons and not houses. The Commission clarified that saving potential is described in Task 3, also taking into account for user behaviour, and that this is decoupled by the market/stock analysis, which is used to calculate consumption figures per unit of product, to be used in the following tasks.

Considering that it is not easy to provide more detailed information, most of stakeholders proposed to accept and support the proposed assumption of the model and the structure of the market analysis, considering that the final goal of the study is water and energy saving.

The Commission summarized saying that the market and stock model appeared generally supported. However, some clarification on the definition of shower (systems) and showerheads seems necessary.

## Agenda Point 6. Task 3 - User and system aspects

The Commission presented the elements collected for Task 3, including information on:

- Water and energy use in taps and showers
- Water and energy saving potential
- Impact on waste water collection and treatment infrastructures.

Stakeholders generally agreed on the calculations performed, which seems valid and reproducible. However, it was pointed out that saving figures could be optimistic. The actual saving could be lower because water/energy saving technologies are currently spread on the market and thus the baseline scenario should be revised. **The Commission replied that indications on how to better set the technology baseline and quantify the saving potential are welcome.**

The discussion moved on the selection of 15°C as inlet temperature, considered a conservative choice as European average value along the year. Some stakeholders argued that in some MS the temperature could be higher (20-25°C), also as an effect of pre-heating due to heating system losses in the building. For

instance, it was reported that the annual average temperature could be 20°C for Spain and up to 25°C in some Spanish regions. However it was indicated that pre-heating also require energy. Based on these elements it was agreed that 15°C is a reasonable choice but it should not be written that this is a conservative value. Probably it would be better to reword "conservative" in something like "realistic".

With reference to the proposed energy saving, a stakeholder highlighted that it seems to be over-estimated, considering for example that the French regulation on buildings has estimated that the energy saving potential can be 7% employing the BATs present on the market. It was also pointed out that saving potential could be over-estimated because taps and showers have been always considered at their maximum flow rate.

The Commission clarified that consideration on user behaviour and technologies have been included within the analysis, even though the goal of the project is not proposing policies on user behaviour. In particular, the savings potential for showers was not set at 40% but at 34% taking into account that use of lower flows could prolong the use of showers. Regarding user behaviour, the focus is on the technology, because the scope of the project is on that.

Other stakeholder agreed with the presented assumption, particularly with reference to Portugal.

The Commission asked for more precise input in order to refine the proposed assumptions for user behaviour, scenarios of use and water/energy saving.

With respect to showers, a stakeholder made to observe that some products could have water flows of 18 L/min even though they are claimed to be water saving systems. It was underlined that there are not standards and regulations to test them. Another stakeholder argued that a flow rate for showers of 6 L/min could be low for showering while other stakeholders reported that in some cases pressure can be so low that it is not possible to go above that value.

The Commission clarified that flow rate number have been taken from the Water Label and that these data can be revised if updated information will be sent by stakeholders. In particular, on one hand it was remarked the important of getting information and consensus on the baseline scenario, for understanding the current performance of the product at European level, and on the related water/energy saving potential. On the other hand it was reminded that potential ecodesign measures will target worst products.

Stakeholders asked to consider the balance between saving and associated costs. The Commission clarifies that the issue is treated within Task 4 on technologies, even though additional input from stakeholders is needed.

Additionally, it was suggested that a possible objective of the study could be to decreasing the losses of water in the distribution system, which represent 10-50% of the water supply. However, the Commission clarified that the preliminary study considers the products 'taps and showers' and that there are other European policies handling that issue.

The Commission summarized the discussion remarking the general support to the presented figures and inviting stakeholders to refine the final assumptions for the estimation of water and energy potentials.

#### **Agenda Point 7. Task 4 – Technologies**

The Commission presented the elements collected for Task 4, including information on:

- Conventional and water/energy saving technologies
- Market segmentation of technology;
- Production, use, end-of-life.

Stakeholders informed the Commission that the order of magnitude of the payback time of sensor taps should be years and not months. Moreover, it was pointed out that there could be significant differences in prices between countries and it was thus asked where data on costs of products and utilities come from.

Stakeholders also reported that some costs are overestimated. For instance, the cost of two-stage taps typically varies between 60-200 euro and high-quality thermostatic valves can be found that cost 100 euro.

The Commission remarked that payback time depends on the reference costs and that the presented values are examples calculated by manufacturers and used for their external communication. Stakeholders were invited to check the information on cost and payback time of technologies and to complement it providing additional indications on the possible variation ranges.

The Commission then underlined that knowing market segmentation and penetration of products in terms of maximum water flow is key information that needs to be improved. The starting point was to refer to the statistics of the Water Label, indicating the number of products registered for different water-efficiency rating classes. Based on these statistics, many products result to perform efficiently. However, this is a partial picture of the distribution of products in terms of maximum water flow. The scheme is indeed voluntary and producers may be not willing to register worse performing products. Additional details from producers are needed to get a more complete picture. Stakeholders involved in the Water Label scheme reported that the trend is towards a more extensive labelling of products and that they are currently carrying-out an extensive research in order to collect information on the market share of products in terms maximum water flow rate for several registered brands. Getting information on the water consumption of the actual stock of products at home would be more challenging. Stakeholders said that information on the market share of products in terms of maximum water flow shall be shared with the Commission by 10 November. The Commission explained that this additional information would be very important to draw right conclusions.

Some stakeholders reported that a flow rate below 6 L/min does not fit with kitchen taps since this would require a too long time for filling volumes.

It was asked if and how impacts from the use of materials will be analysed in the study, being products on the market characterized by different weights and compositions. The Commission explained that a streamlined LCA will be carried-out in Tasks 5 and 6 for the assessment of the environmental impacts from the product and that this shall be done using the MEeRP Eco-report tool. Different materials can be considered but the main issue for this product is considered to be the consumption of energy and water in the use-phase. Some stakeholders requested to focus the analysis of products and related environmental impacts also on plastic showerheads alone since they are sold separately. The Commission explained that a product system approach is applied in the study. Showerheads are not used alone but with a valve. Moreover, it was generally agreed to focus on water and energy consumption since impacts from materials are less important. To consider showerheads alone would mean that weight of materials and related impacts are decrease without affecting water and energy use.

Finally, some stakeholders wondered how showers would be labelled, since valves and showerheads can be sold together or separately, with showerheads that use but do not supply water. However, it was explained that it was premature for the moment to talk about practical aspects related to the implementation of labels.

#### **Agenda Point 8. Task 5 – Preliminary environmental assessment**

The Commission presented the preliminary results from the environmental assessment carried-out with the Ecoreport tool.

Stakeholders asked if real water consumption, inclusive of water loss in the distribution system, was considered or not. It was remarked that water consumption due to leakage can be significant and that it should be studied how to reduce this waste of water. Stakeholders said that water losses in distribution networks are independent from the flow and mainly due to the piping pressure.

The Commission explained that this was a preliminary assessment based on the outdated data presented in the KO meeting of Barcelona and that the assessment will be revised based on the updated information gathered along the previous tasks. These already include system aspects: water losses in the distribution network, energy in water supply and waste water treatment and losses from the heating systems. User behaviour is also taken into account when estimating average consumption figures at EU level and related variation range. The Commission also explained that the focus of the project is on the product. Other activities are on-going to limit leakage.

Some clarifications were requested with respect to the energy sources considered for water heating. The Commission explained that, based on interpretation of data from the VHK study, the EU energy mix considered is: 40% electricity, 40% natural gas and 20% oil. Solar energy was not considered because seems to cover about 1% of the European demand of energy for water heating.

Stakeholders doubted about the relatively high impacts obtained for the product distribution. It was reported that this could be influenced by the value considered for the packaging volume, 0.1 m<sup>3</sup>, which is considered too big. The Commission replied that the product distribution is relevant only for particulate matter (10%) because of the road transport. Figures will be updated.

The Commission concluded saying that the analysis will be updated based on the results obtained from previous tasks and completed including system aspects and different scenarios of analysis. These could focus on domestic and non-domestic use and durability of the product. Materials and weight of the product instead appears of secondary importance. LCC will be also added to the assessment. For this reason it was remarked that it is important that stakeholders support the Commission in the collection of information on costs of technology, installation, use, maintenance, repair and EoL, as pointed out in the presentations for the previous tasks.

### **Agenda Point 9. Synthesis and potential results from previous tasks**

The Commission summed up the main points discussed in the meeting and invited stakeholders to discuss preliminarily on the possible policy options that could potentially emerge from the project:

- a. No action other than Ecolabel and GPP;
- b. Resource efficiency labels that would be used to provide accurate information to consumers on water and energy use;
- c. Implementing eco-design measures that would be used to eliminate the worst products from the market;
- d. Combination of (b) and (c);
- e. Others (e.g. voluntary industry agreement as an alternative to implementing eco-design measures).

It was remarked that no predefined conclusion are drawn but that it would have been interesting to collect some preliminary observation from stakeholders.

Stakeholders underlined the need of having a uniform approach implemented at European level.

It was generally considered that water and energy efficiency labelling is more and more accepted by producers and consumers. 49 companies are registered in the Water Label scheme and the number is supposed to increase. The dissemination to consumers of information on water consumption is of key importance given the environmental improvement potential for this product group. A EU efficiency labelling scheme was welcome that is able to address consumers to best performing water-using products. This was considered needed also to make some clarity among existing labels and claims and to complement the EU Ecolabel and the GPP schemes.

A part of stakeholders was open to explore possibilities to implement ecodesign measures to exclude worst products from the market, also considering that ecodesign is already applied to appliances for which the improving potential is marginal, compared to that potentially achievable for taps and showers.

Another part of stakeholders was instead reluctant about the application of ecodesign measures. The removal of some products from the market could leave access only to products whose performance may not meet the expectations of consumers. In that case it was recognized the risk that consumers could buy products on-line that do not fulfil quality and environmental minimal requirements. The Commission explained that ecodesign aims at eliminating certain products from the market but ensuring that the performance of the remaining products is satisfactory. However, if any, ecodesign measures would need to be coupled with labelling to be effective.

Some stakeholders indicated the influence of user behaviour on the definition of the actual product performance which could offset the potential benefits associated to ecodesign. It was remarked that water



and energy prices already punish the consumers. However, the Commission explained that user behaviour is an issue for all products (e.g. TV, cars) and that the focus of the project is on the product technology. With respect to the price of water and energy, it was pointed out that current prices could not reflect the real availability of resources and thus there could be the risk they do not lead to expected savings.

Labelling was generally perceived as the minimal outcome of the project. A label on the products and/or their packaging would be a very good communication instrument. However, setting Ecodesign requirements will require the detailed categorization of products and related minimum performance requirements. The Commission said that it will be very important to build on the experience gained with the Energy label for other products, which is regulated by the energy labelling directive. The Commission also informed the stakeholders that measures for internet sales have been adopted requiring that internet shops shall have to display energy labels of products.

#### **Agenda Point 10. Next steps and planning**

The Commission recalled the next steps of the project:

1. 10 November as deadline for comments on the working document
2. 2<sup>nd</sup> TWG meeting planned to take place in Brussels on the 2<sup>nd</sup> half of Mar 2014
3. Completion of the final report expected before summer 2014.
4. (Potential consultation process for the implementation of sustainable product policy tools)

In particular, it was remarked the importance of respecting the deadline for comments in order to keep the project on track. Stakeholders were also invited to indicate in which dates they already know to be unavailable. With this respect it was said that an important trade fair will take place in Milan from 18 to 21 March 2014.

#### **Agenda Point 11. Any other business and conclusion of the meeting**

The Commission acknowledged the participants of the meeting for the fruitful discussion and for the positive feedback on the reports which indicate that, with the exception of some adjustment and clarification of definitions, the project is going to a good direction. The material produced seemed to represent a good basis for the further development of the study and written comments should be received by 10 November.