Technical assistance study for the assessment of the feasibility of using "points system" methods in the implementation of Ecodesign Directive (2009/125/EC)

TASK 1

Stakeholder consultation

June 2017

EUROPEAN COMMISSION

Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs
Directorate Directorate C – Industrial Transformation and Advanced Value Chains
Unit Directorate C1 – Clean Technologies and Products

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European Commission
B-1049 Brussels

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Prepared by:
This report has been prepared by Paul Waide from Waide Strategic Efficiency with comments provided by other members of the consortium comprising Waide Strategic Efficiency (technical leader of the study), VITO (contractual lead), Fraunhofer, Viegand Maagøe and VHK.

Project website: points-system.eu
Specific contract no.: 478/PP/GRO/IMA/15/1164 – SI2.722599
Implements Framework Contract: 409/PP/2014/FC Lot 2.

This study was ordered and paid for by the European Commission, Directorate-General for Growth.

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1. Introduction

Stakeholder consultation is an essential component of the study to compile technical and procedural input and to gather relevant views concerning the acceptability of the concept, the most appropriate approaches and the viability of the methods developed. It is also a key means of facilitating dissemination of the study activities and findings.

The approach taken in this study comprised a mixture of proactively seeking engagement of selected key stakeholders combined with a less targeted and more open solicitation of views. The latter was managed through the establishment of a public domain project website wherein interested parties would be permitted to register for news of the project and to participate in stakeholder meetings and submission of views via position papers. The former was done via direct communication with and survey of key targeted stakeholders as agreed with the Commission.

2. Stakeholder consultation procedure

2.1 Compilation of a list with stakeholders

In order to target the stakeholder consultation process the project team established a list of stakeholders who were consulted during the conduct of the study. The list included member organisations of the Ecodesign Consultation Forum, the EU Member States (both their representatives for the Ecodesign and Energy Labelling fora and representatives of their market surveillance organisations), relevant industry groups and NGOs with an interest in the topic, members of European Standardisation Organisations, experts from organisations that are or have been involved in relevant EU product studies (e.g. Ecodesign preparatory or impact assessment studies), and specific subject experts.

A list with in total 203 stakeholders was compiled. The stakeholders were invited to subscribe to the website (see next paragraph).

2.2 Project website

A new website with url 'https://points-system.eu/' was developed specifically for this study. The website served as a channel of information distribution and allowed for stakeholder registration.

Draft reports, stakeholder meeting announcements and other relevant documents have been published on the website.

220 stakeholders registered themselves through the website as a stakeholder for the project.

2.3 Stakeholder survey including member states

Preparation and contents of the survey

The purpose of the survey was to gather Member States' preliminary views regarding the feasibility and usefulness of introducing Ecodesign requirements for complex products/product systems via an overview assessment points system or similar methods. A structured written survey was prepared that includes an introduction to the project and its purpose, and a set of questions regarding:

- the anticipated viability or otherwise of a points based approach

- expectations regarding the likely utility of such a system
- issues of principle concerning the application of a points system approach within generic Ecodesign implementing measures
- methodological approaches that could be used or should not be used
- standardisation and its potential role in supporting a points-based methodology
- certification, market surveillance and conformity assessment issues.

Preparation of the survey was done using the following techniques:

- ensuring full contact details are provided
- addressing confidentiality issues through guaranteeing anonymity of the findings unless stakeholder signal we can quote them directly
- structuring the questions so they are grouped thematically and follow a logical progression
- structuring questions into those that only permit selection of one among a set of pre-set answers (and therefore allow quantitative analysis) and those that are textual and hence only allow qualitative analysis
- ensuring the length and detail of the survey instrument strikes the right compromise between allowing the issues to be adequately covered and not discouraging participation.

The questionnaire template is presented in Annex 1 of this report.

Identification and selection of subset of Member States

In consultation with the Commission, the project team proposed a set of up to 10 and not less than 6 Member States for inclusion within a direct stakeholder survey process. The team proposed Member States that:

- are known to be knowledgeable and proactive in response to such surveys on Ecodesign policy
- represent key constituencies (e.g. industry, consumers or socio-economic groupings
- best cover the Community's geography and socio-economic/ethnic constituencies.

Direct phone interviews were conducted with the MS representatives selected and MS representatives were asked to complete the survey electronically.

Distribution of the survey and conduct of phone interviews

The MS survey was distributed via email to the targeted stakeholders, who were offered the option of completing the survey instrument electronically and/or taking part in a direct phone interview (see MS discussion above). If they opted for the phone interview they first received the electronic survey and were then "walked through" the questions on the phone. This allowed the project team to probe answers a little more thoroughly and thus helped to elucidate the key issues and concerns.

Processing of the survey results

The responses to the surveys were entered into the survey document by the respondents themselves (if they had chosen this option) or by the project team (if the interviewees had chosen the phone interview option). In the latter case respondents were invited to verify that the answers had been correctly entered.

2.4 Two stakeholder meetings

Two stakeholder meetings took place in Brussels at facilities provided by and hosted by the Commission.

The first stakeholder meeting took place on 30th June 2016. The following agenda topics were discussed with the 36 stakeholders present at the meeting:

1. Welcome
2. Introduction to the study and its background by Michael Bennett (MB) (EC, DG GROW)
3. Presentation of draft findings – initial Task 2 report (Consortium VITO - Waide Strategic Efficiency Ltd, Viegand & Maagøe, Fraunhofer ISI, VHK) by Paul Waide (PW) of WSE, UK.
4. Analysis, discussion and exchange on "Points Systems" studied (all)
5. Results of questionnaire of Member States regarding potential for "Points Systems" uses in Ecodesign (Consortium members), presentation by Paul Waide
6. Information on planned Case Studies
7. Next steps
8. AOB.

The minutes of this stakeholder meeting are presented in Annex 2. The slides of this stakeholder meeting are presented in Annex 3.

The second stakeholder meeting took place on 10th March 2017. The following agenda topics were discussed with the 41 stakeholders present at the meeting:

1. Opening – Introduction to the study and quick summary of the object of today's meeting (DG GROW)
2. Presentation of draft Task 3 report – Proposed generic points systems methodology (Consortium VITO - Waide Strategic Efficiency Ltd–Viegand & Maagøe–Fraunhofer ISI–VHK)
3. Presentation of draft Task 4 report – case study of generic points methodology applied to Data Storage Devices (Consortium VITO - Waide Strategic Efficiency Ltd–Viegand & Maagøe–Fraunhofer ISI–VHK))
4. Presentation of draft Task 4 report – case study of generic points methodology applied to Machine Tools (Consortium VITO - Waide Strategic Efficiency Ltd–Viegand & Maagøe–Fraunhofer ISI–VHK))
5. Analysis, discussion and exchange on "Task 3 - generic points system methodology" (all)
6. Discussion and exchange on "the Task 4 – Data Storage Devices case study" (all)
7. Discussion and exchange on "the Task 4 – Machine Tools case study" (all)
8. Presentation of implementation issues (Consortium VITO - Waide Strategic Efficiency Ltd–Viegand & Maagøe–Fraunhofer ISI–VHK))
9. Discussion of implementation issues (all)
10. Next steps
11. AOB.

The minutes of this stakeholder meeting are available in Annex 1 of the Task 3 report.

3. Findings from the stakeholder consultation

The discussion with stakeholders both via the 1st Stakeholder meeting held in Brussels on 30th June 2016 and the Member State survey led to two sets of findings and conclusions, which will be discussed in the following sections.

3.1 Overall Comments on a "Points-System" Approach

The overview comments from the 1st Stakeholder Meeting, considered together with the previous Member States' feedback, may be summarised by the following representative bullet points:

- There is support for, or at least openness to, the use of a points-based approach to setting Ecodesign requirements for products that cannot otherwise be treated within a conventional Ecodesign framework.

- Clarifying the circumstances of when a conventional Ecodesign approach is no longer sufficient is likely to be necessary before a points system approach would be considered for any specific product; however, this may not be straightforward. Stakeholders have indicated that guidelines of when it would, and when it would not be, appropriate to derive a points system approach would be welcome i.e. to establish a non-binding set of considerations that would determine whether development of a points-based approach might be justifiable for a given product.

- Product complexity is not very straightforward to define but it is helpful to examine what it involves. Many stakeholders provided insights into this aspect, which are further elaborated in the following section.

- Numerous stakeholders advised that the points-based approach considered in this study should limit the number of environmental impact parameters it attempts to address. Advice was given for either the project activities to be focused exclusively on energy in use, or alternatively to consider no more than one or two other environmental impact parameters, of which material efficiency was the most commonly-cited additional parameter.

- Most stakeholders felt it was premature to attempt to devise weightings that are applicable across different types of environmental impact categories. This is because they felt there was unlikely to be any consensus on what the relative weightings to be given to different environmental impact categories should be.

- There was a clear preference for panel-based methods to determine weightings and a weighting approach, if these were to be attempted. However, stakeholders indicated that this needed to be manageable within an Ecodesign regulatory framework. Note that these weightings could be applied to derive an overall score within an impact criterion (such as energy performance), and hence weightings per se are not inconsistent with the preceding point.

- There was a desire for a rational analytical framework to be established to help derive weightings and the points structures.

- There was considerable scepticism about the current viability of methods that involved full Life Cycle Assessments, due to the immaturity of data, lack of practical means of verifying claims, lack of consensus on approaches and difficulty in comparing across inherently different impact parameters.

- Stakeholders indicated that points system approaches could be suited to the establishment of both generic and specific Ecodesign requirements, and

indeed could potentially provide a hybrid approach that spans both aspects i.e. a type of third approach.

- Pragmatic considerations will be paramount when determining the viability of any method.

The methodological framework proposed in this report is guided by the above responses, in particular with regard to the overall approach and product complexity considerations. It is important to reflect on the stakeholder feedback received, both when determining under what circumstances a points system should be considered, and in assessing how it should be structured. It is also vitally important to appreciate that this guidance has strong implications for the methodology proposed, most notably in removing from consideration points systems approaches that aim to apply value judgements across inherently different parameters (such as the various environmental impact parameters).

3.2 Product complexity

Building on the above remarks, it was also necessary to consider in what way might a product be considered as complex.

These are the comments received from the stakeholder consultation process that addressed this question:

"A complex product:
- does not provide a standard configuration / functional unit
- can have multiple functions,
- can be modular,
- is often a customised product, adapted to a specific application,
- can be finally installed at the user's site,

and/or

- can have different performance levels dependent on the operating conditions at the user's site
- can have functional parameters that are inherently difficult to measure."

"The definition of a complex product needs to be clearly distinguished from an extended product."

"A product that has one or more of the following characteristics:
- Product / system with more than one function (machine tools, washer driers)
- The performance is too dependent on the duty cycle (pumps, motors)
- Heterogeneous types of products (machine tools)
- Custom-made products/systems/installations (machine tools, steam boilers, industrial ovens, large ventilation units, large boilers and heat-pumps, large chillers/heat-pumps)"

"Usually they are typically construction products that have to be installed, and products systems e.g. business to business and data centres (enterprise servers), consumer electronics, and large professional products and tertiary lighting products."

"When products are not sold as packages but as components”

“A complex product is a collection of various parts (modules) that can be assessed separately, that allow for a large number of combinations where each combination of modules constitutes a product that has different functionalities/performances (to suit different needs of end-users).

Note: differentiation between modules could be done by software i.e. potentially diagnostic software could be applied to assess the functionalities and energy/resource efficiency of specific modules in each functional mode and to determine the apportionment of effort/time in each mode.”

Some further comments:

1. "A product that can be used in various ways (for which different user profiles exist) need not be a complex product."
2. "A large product need not be a complex product. Transformers can be very large but they are not complex products in the above definition."
3. "A points-system can be oriented on functionalities/performance/efficiency but also on savings options”

Annex 1: Questionnaire template

QUESTIONNAIRE ON POINTS SYSTEMS APPROACHES FOR ESTABLISHING ECODESIGN REQUIREMENTS OF COMPLEX PRODUCTS

Prepared by Waide Strategic Efficiency, VITO, Fraunhofer ISI, VMAS and VHK for the use of DG GROW

May 2016

Project summary

The European Commission has instigated a technical assistance project to evaluate and derive a "points-system" methodology that could be applied to the development of Ecodesign requirements for complex products and/ or product systems. This need arises due to the increasingly common investigation of more complex energy-related products and systems for prospective Ecodesign and Energy Labelling implementing measures within the Ecodesign work plan, most notably since the advent of the 2012-2014 Ecodesign work plan. Examples of such products include machine tools, data storage devices and professional washing machines/ driers, which are complex in that:

- they may have more than one functional unit (i.e. the quantified performance of a product system for use as a reference unit in a life cycle assessment study), due to the variety of functions the product is capable of performing.
- the functional units may be inherently difficult to assess due to measurement or methodological difficulties.

It is also common for the product groups concerned to have varying degrees of heterogeneity that complicate their assessment against common metrics and measurement methods. However, as savings potentials from the adoption of appropriate Ecodesign technologies can be significant, and these technologies are theoretically capable of being assessed on a modular basis, the European Commission is interested in evaluating whether it is feasible to devise an assessment methodology for product systems comprised of technology/design modules that considers the ensemble of modular technologies deployed.

This notion was first explored within the Ecodesign process in the case of machine tools within a working document put forward by the Commission at the May 2014 Consultation Forum which proposed one potential option based around a points systems approach. The resulting discussion highlighted the potential of this notion but also the need to explore options in greater depth and to produce a rationale that would allow the viable approaches to be identified and their strengths and limitations to be assessed. The present technical support services contract aims to elucidate this issue via the conduct of analyses that will clarify the options, identify the most promising method(s) and then demonstrate their viability via some worked case studies.

To be able to fulfil the specific objectives of the project, our approach and methodology is structured into six tasks as follows:

Task 1 - Stakeholder consultation, including the compilation of a stakeholder list and a stakeholder survey.

Task 2 - Review of state-of-the-art methods, in which all relevant existing methodologies will be catalogued and reviewed, followed by a comparative analysis.

Task 3 - Method development, which entails the derivation of a prospective method for establishing Ecodesign requirements for complex products. This is to be derived from consideration of at least: a) the fit with MEErP, b) the fit with the provisions of the Ecodesign Directive, c) suitability for addressing energy-related

and resource efficiency aspects, d) modular build on existing Ecodesign implementing measures, e) measurability via standards.

Task 4 - Case studies, where at least two product groups will be evaluated using the method proposed in Task 3. The Task 3 method may be iteratively revised and applied, as appropriate.

Task 5 - Reporting

The study is being carried out by a consortium that spans a broad spectrum of expertise including technological know-how and environmental engineering, economic and environmental assessment, market and consumer analysis. Waide Strategic Efficiency is technical leader of the study. Other involved project partners are VITO, Fraunhofer, Viegand Maagøe and VHK.

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Notes on completing the questionnaire

Soliciting Member States' views of is of central importance to the study and we would like to invite you to support this effort by completing the attached questionnaire, and arranging a short follow-up interview. By 27 May we will send you a draft version of the first (Task 2) report, which provides a review of the state-of-the art of "points system" methods. We invite you to look at this before completing the questionnaire

This questionnaire is the survey of Member States referred to in Task 1 of the project summary above.

*In total there are 19 questions. Most of these are multiple-choice questions wherein you will be invited to add an **X** against the choice you opt for. In each case you are also invited to add a text explanation for your response.*

The questionnaire may appear to be lengthy in terms of the number of pages; however, this is mostly because respondents are asked to add explanations of their choices in the text boxes provided.

When processing the questionnaires received the responses will be treated by the project team as if they were given under Chatham House rules, i.e. we may choose to quote a response in our Task 1 report but we will not attribute the quote to your organisation or any of the other respondents to the questionnaires. Nor will we indicate which Member States were invited to complete the questionnaire.

The consortium partners would like to thank you for taking the time to complete this questionnaire and would be very grateful if you could return the questionnaire by 6 June, and propose one or two dates/ times when you would be available for a 1-hour follow-up interview between 7-17 June inclusive

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About you and your organisation

Please enter your name in the box below

Your name	
Your organisation	

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Questionnaire – on points-system approaches for complex products

Q1. Do you think it is necessary to establish a strict definition of what a complex product is in Ecodesign regulatory terms?

	Response		
Options	Yes	No	Unsure
Response (add X)			

Please explain your answer

Explanation	

Q2. How would you define a complex product from an Ecodesign regulatory development perspective?

Please enter your response in the cell below

Response	

Q3. Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

	Response		
Options	Yes	No	Unsure
Response (add X)			

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Please explain your answer

Explanation	

Q4. In principle do you agree that the Ecodesign characteristics of complex products can be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

	Response		
Options	Yes	No	Unsure
Response (add X)			

Please explain your answer

Explanation	

Q5. What issues do you think would be encountered were the Ecodesign characteristics of complex products to be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

Please add your response in the cell below

Response	

Please explain your answer

Explanation	

Q6. Within an Ecodesign context do you think that, at least for some products, it is viable to apportion functional units among modules that perform more than one function, as is done for example in the ISO 14955-1 standard for machine tools or in the "installer" energy labelling requirements for space and water heaters?

	Response		
Options	Yes	No	Unsure
Response (add X)			

Please explain your answer

Explanation	

Q7. Multi-criteria points systems methodologies usually begin by establishing the set of (environmental) impact criteria to be assessed. Do you think any prospective points scheme to be applied to Ecodesign assessment of complex products should focus on key impact criteria first or should it analyse all impact criteria?

	Response		
Options	Key criteria	All criteria	Unsure
Response (add X)			

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If you answered *Key Criteria* please explain which criteria should be focused upon and why

Explanation	

If you answered *All Criteria* please explain your answer and should it dedicate equal effort to all criteria? (If not, which should it focus most effort on?)

Explanation	

If you answered *Unsure* please explain your answer

Explanation	

Q8. Multi-criteria points systems approaches often use grouping and weighting of impact (assessment) criteria to derive an overall score: do you think this would be a helpful approach for assessing the Ecodesign of complex products?

	Response		
Options	Yes	No	Unsure
Response (add X)			

Please explain your answer

Explanation	

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Q9. If weightings were to be applied, which method for determining the weightings do you think would be most appropriate?

	Response			
Options	Panel method	Monetisation	Distance to target	Other
Response (add X)				

Please explain why and how you think this could work in an Ecodesign regulatory environment

Explanation	

Q10. Do you think it might be appropriate to only apply a weighted-points systems approach for the Ecodesign assessment of complex products to purely energy-related assessments, where the weighting is applied between the various modules that make up the device?

	Response		
Options	Yes	No	Unsure
Response (add X)			

Please explain your answer

Explanation	

As explained in Section 3.2 of the Task 2 draft report, the Analytical Hierarchy Process (AHP) is a structured technique for organising and analysing complex decisions, developed by Saaty in the 1970s, and subsequently extensively used, studied and refined. AHP provides a comprehensive and rational framework for structuring a decision problem, for representing

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and quantifying its elements, and for relating those elements to overall goals. Alternative solutions are evaluated, resulting in a ranked and weighted order of preferences.

Q11. Multi-criteria assessment processes often use an Analytical Hierarchy Process methodological approach to establish a hierarchy between the criteria. Do you think this could be a viable tool for the Ecodesign assessment of complex products?

	Response		
Options	Yes	No	Unsure
Response (add X)			

Please explain your answer

Explanation	

Q12. Do you think that a points systems approach has the potential to form a viable methodology for the development of Ecodesign requirements for complex products?

	Response		
Options	Yes	No	Unsure
Response (add X)			

If yes, please explain in what way?

Explanation	

If no, please explain why not?

Explanation	

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If unsure, please explain your answer

Explanation	

*Q13. Do you think a points systems approach might be suited to setting **generic** Ecodesign requirements?*

	Response		
Options	Yes	No	Unsure
Response (add X)			

Please explain your answer

Explanation	

*Q14. Do you think a points systems approach might be suited to setting **specific** Ecodesign requirements?*

	Response		
Options	Yes	No	Unsure
Response (add X)			

Please explain your answer

Explanation	

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*Q15. Do you think a points systems approach applied to setting **generic** Ecodesign requirements for complex products might pose any specific challenges for market surveillance?*

	Response		
Options	Yes	No	Unsure
Response (add X)			

If yes, please explain in what way?

Explanation	

If no, please explain why not?

Explanation	

If unsure, please explain your answer

Explanation	

*Q16. Do you think a points systems approach applied to setting **specific** Ecodesign requirements for complex products might pose any specific challenges for market surveillance?*

	Response		
Options	Yes	No	Unsure
Response (add X)			

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If yes, please explain in what way?

Explanation	

If no, please explain why not?

Explanation	

If unsure, please explain your answer

Explanation	

*Q17. Which other possible issues do you foresee that could pose a problem to the application of a points-systems methodological approach to the setting of **generic** Ecodesign requirements?*

Please enter your response in the cell below

Response	

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*Q18. Which other possible issues do you foresee that could pose a problem to the application of a points-systems methodological approach to the setting of **specific** Ecodesign requirements?*

Please enter your response in the cell below

Response	

Q19. What guidance, advice or possible alternative approaches would you offer for the continuation of this research exercise?

Please enter your response in the cell below

Response	

The project team would like to contact you for further discussion and/or clarification of your answers. We would be very grateful were you able to propose some dates and times when we could call you between 7-17 June inclusive in the cell below

Please enter your response in the cell below

Response	

Please enter the telephone number we should call you on in the cell below

Response	

Thank you for taking the time to complete this questionnaire.

Please now send it to Paul Waide by June 6th at paul@waide.co.uk
Thank you!

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Annex 2: Minutes first stakeholder meeting

1st stakeholder meeting "Technical assistance study for the assessment of the feasibility of using "points system" methods in the implementation of Ecodesign Directive (2009/125/EC)" Brussels, 30/06/2016, 10.00-17.30h

Participants

The Commission:

- Michael Bennett (DG GROW);
- Davide Polverini (DG GROW);

Project team:

- Paul Waide (WSE);
- Clemens Rohde (Fraunhofer);
- Omar Amara (VITO);
- Jonathan Wood (Tenvic/VMAS);

Stakeholders:

- Floris Akkerman (BAM);
- Sten Hakan Almström (Electrolux);
- Stephane Arditi (EEB);
- Erich Arens (Kannegiesser);
- Els Baert (Daikin Europe);
- Thomas Ebert (Apple);
- Chloe Fayole (ecostandard);
- Sylvie Feindt (DIGITALEUROPE).
- Filip Geerts (CECIMO);
- Francesca Hugony (ENEA);
- Dorothea Kadenbach (HKI);
- Rainer Kalamajka (Miele);
- Kaisa-Reeta Koskinen (Energiavirasto);
- Pieter-Paul Laenen (Hewlett-Packard Europe, EPE)
- Sigrid Linher (Orgalime);
- Andrei Litiu (EUBAC);
- Carlos Lopes (Energimyndigheten);
- Aline Maigret (BEUC);
- Félix Mailleux (CECED);
- Irina Messerschmidt (VDMA);
- Maurizio Orlandi (Epta Refrigeration);
- Martial Patra (Schneider Electric);
- Fanny Rateau (EHI);
- Ralf Reines (VDW);
- Edward Michael Rimmer (DECC UK);
- Jethro Schiansky (Vorwerk);

- Pierluigi Schiesaro (Arneg);
- Francesco Scuderi (Eurovent);
- Mihai Scumpieru (Mitsubishi Electric Europe, MEE);
- Hans-Paul Siderius (RVO);
- Kamila Slupek (CECIMO);
- Bram Soenen (Ministry of Environment – Belgium);
- Bryan Whittaker (BT connect);
- Edouard Toulouse (Independent consultant);
- Carina Wiik (Teknologiateollisuus);
- Roland Ullmann (Siemens);

Agenda

1. Welcome
2. Introduction to the study and its background by Michael Bennett (MB) (EC, DG GROW)
3. Presentation of draft findings – initial Task 2 report (Consortium VITO - Waide Strategic Efficiency Ltd, Viegand & Maagøe, Fraunhofer ISI, VHK) by Paul Waide (PW) of WSE, UK.
4. Analysis, discussion and exchange on "Points Systems" studied (all)
5. Results of questionnaire of Member States regarding potential for "Points Systems" uses in Ecodesign (Consortium members), presentation by Paul Waide
6. Information on planned Case Studies
7. Next steps
8. AOB.

Actions

Project team:

- Post the Member State Survey online;
- Make available the slides of this meeting on the website.

Stakeholders:

- Provide comments on the draft Task 2 report.

1 Welcome

Welcome by DG GROW.

2 Introduction to the study and its background by Michael Bennett (MB) (EC, DG GROW)

Michael Bennett (MB), DG GROW, requests that the participants provide comments on the draft Task 2 report.

3 Presentation of draft findings – initial Task 2 report (Consortium VITO - Waide Strategic Efficiency Ltd, Viegand & Maagøe, Fraunhofer ISI, VHK) by Paul Waide (PW) of WSE, UK

See slides 1st stakeholder meeting

4 Analysis, discussion and exchange on "Points Systems" studied

MB stressed the fact that the goal of the project is to arrive to a single points system approach. Several options will be tested during the conduct of the case studies.
MB asked the audience to share their experiences with different points systems, and the difficulties to implement them.

Els Baert (EB), EPEE indicates that in the case of the energy label for heating systems, it is too soon to provide feedback and there is a lack of reported experience from installers. It was a very long process to develop the factors used in the scheme and the EC simplified the system which means that the reality may not be captured.
She added that points systems remain a good tool to motivate market actors.

Fanny Rateau (FR), EHI stressed that it is difficult to retrieve data and feedback, especially from SMEs.

Rainer Kalamajka (RK), Miele indicated that the points system should have a weighting system, to give priority, for instance, to hygienic aspects for products meant for use in the medical sector.

Hans-Paul Siderius (HPS), RVO stressed the difficulties in obtaining a single score through weighting, as classifying impacts based on their importance (e.g. climate change vs. toxicity) is almost impossible. He recommended that the current study should focus firstly on measuring points via defined characteristics, and secondly (if needed) a weighting system, taking as inspiration the points system methods presented.

Bram Soenen (BS), Belgian Ministry of Environment agrees with HPS. There is a lot of discussion on the weighting systems. If we want results from the study, it might be best to focus on 2-3 aspects, e.g. material efficiency and energy efficiency. In addition, will the results of this study address new product groups or will it address ongoing product groups e.g. windows?

MB stressed that the points system to be developed should be applicable to revisions and new products. We can look at the MEErP and thus not only look to energy efficiency but take some of the trade-offs with resource efficiency into account.

Erich Arens (EA), Kannegiesser, DE and CEN TC 214 (laundry machines) suggested defining clear limits of systems to be evaluated by the points system, as installation and commissioning are often part of the product. Reduction of industrial energy intensity has to take account of activity. Installing and commissioning is part of the service, and of the product to be supplied. Installation is a cost factor

MB: In B2B goods the total costs of ownership are formally taken into account much more. For B2C domestic appliances we attempt to make calculations on the Least Life Cycle Costs (LLCC) curve, based on findings from the Tasks of the Preparatory Studies, which is in effect a format of "total cost of ownership". However, where it differs often from B2B considerations is that in B2C there is not normally a widely-accepted formula for "total cost of ownership" per product group.

Edouard Toulouse (ET), ECOS indicated some methodologies in the list are very far away from potential implementation in ecodesign, like the ones based on financial flows. Some others are not points systems per se, such as the EU Ecolabel. And then there are others that could have been, e.g. the eu.bac energy label for building automation systems, which is fully based on a system of points. The assessment of the capacity to be implemented is too light in the current version of the report, especially on the legal aspects. In addition you don't distinguish between voluntary agreements and regulations. If you design a methodology you have to investigate if you can use it in a regulation or voluntary agreement.

Sten Almström (SA), Electrolux and CENELEC indicates that lifetime of a product is an important criterion to make a trade-off with reparability: repairing old products will not give the same performance as new ones (cf. LED televisions).

PW adds that anticipation of new technologies is needed in the development of the points system.

Kamila Slupek (KS), CECIMO makes suggestions for the report. She suggests to group the different methods that have been presented per product or per process; and to eliminate some of them. She reminds the project team that the points system developed for machine tools has never been tested on real products – it was compiled solely for consideration at the 2014 Consultation Forum on machine tools and welding equipment. For machine tools, the Task 2 report should also be updated with respect to the ongoing ISO standardisation work re. energy efficiency in machine tools.

One system that is missing in the report is Blue competence, the points system for corporate responsibility, as raised by Irina Messerschmidt (IM), VDMA. However, KS argues that corporate responsibility has no direct link to products.

Ralf Reines (RR), VDW and ISO TC 39 WG12 states that the report should be aligned with the presentation made during the stakeholder meeting.
Regarding the presentation of the standard developed by TC 39, he also requests some deletion of sentences in the report: "the standard allows the use of inappropriate values from literature" and about reproducibility "the methodology is rather vague".
ISO TC 39 WG12 is asked to follow-up by PW.

Martial Patra (MP), Schneider Electric, FR and chairman of CEN CENELEC ecodesign coordination stresses that the scope of the points system should be better defined.
He also refers to the more generic standard EN 50598 that has been defined and that can be used for drafting a standard for any application.

Floris Akkerman (FA), BAM states that a points system applicable to complex multi-functional products will be difficult to reach since defining a proper weighting system will be difficult.
Dorothea Kadenback (DK), HHI, adds that the points system may not be applicable to some products as priorities in B2B and B2C are different (e.g., functionality vs energy efficiency).

Els Baert (EB), Daikin Europe, mentions that regarding Heating, Ventilation, Air Conditioning and Refrigeration (HVACR), the interactions of ecodesign with other areas of legislation is interesting and important, e.g., EPBD, F-Gas discussions, the JRC study regarding buildings, etc. She cautions that a useful points system needs to be measurable, and verifiable via market surveillance.

SA indicates that numerous tests would need to be performed by the companies may be expected when laws resulting from the points system enforce them. The design of a points system should consider this aspect, and thus be careful when segmenting the application of the points system into the different uses of a product (e.g., regarding the number of modes to be tested, and associated combinations).

Carlos Lopes (CL), SE encourages the points system initiative as it gives an opportunity to make regulations on products which are not yet regulated, and may also facilitate how we might address material efficiency and resource efficiency in greater depth in EU ecodesign policy measures.

Rainer Kalamajka (RK), Miele, also supports the adoption of an innovative approach regarding points systems and ecodesign.

RR emphasises that the stakeholder consultation is meant to help in developing the best possible points system by first discussing the outcomes of the exploratory study.

5 Results of questionnaire of Member States regarding potential for "Points Systems" use in Ecodesign (Consortium members), presentation by Paul Waide

Filip Geerts (FG), CECIMO says that the first question to consider is whether a points system is the right approach to adopt.

MB says that whether or not a point system is the right approach is the whole purpose of exploring these ideas further. In the answers from the Member States you can see a number of responses regarding how these elements can be used. You may have a mixture of classic requirements and then overlaid on those, you get more points if you exceed the classic requirements (e.g. material efficiency). With this we want to open the box of ecodesign for products.

Thomas Ebert (TE), Apple states that if the goal is the comparability of products, then a points system is needed.

ET noticed that the trend is that most products become more and more complex, become smarter, and can optimize energy use. We face more challenges. Ecodesign has had various ways of reacting, e.g. correction factors, bonuses, getting an additional class on an energy label or showing something additional on an energy label. What is missing in this study is that all this is not yet assessed. This has not been done anywhere else, to date. To answer the first question: "What criteria should be used?" - that will depend on the theme. You have to look at the different options on

the table and then assess which one is best. It will probably differ from product to product.

MB explains that a points system is aimed to provide a tool for manufacturers (compliance with regulations, improvement measures) and also consumers (comparison of products).

Sigrid Linher (SL), Orgalime, mentions that in the forthcoming revision(s) of the Ecodesign "MEErP" methodology, there might be potential for mutual interaction with a points system approach.

Mihai Scumpieru (MS), MEE states that complex systems are already captured by ecodesign in e.g. lot 1, 2, 22, 12 which capture very complex products. If the aim is to go one step behind or beyond the MEPS values in ecodesign, then we enter the realm of the EU Ecolabel and GPP.

MB agrees that the philosophy is a bit like energy labelling. However, with ecodesign we manage only a small corner. For the 95% you can't manage, we can put something approximate.

Pieter-Paul Laenen (PPL), HPE refers to the American system EPEAT and TE explains it. It is a US EPA environmental performance points system for electronic equipment. It is comparable to the EU Ecolabel and Blaue Engel (DE). It sets minimum standards and then gives Bronze, Silver, Gold ratings at the product level.

According to BS, a points system is inappropriate for products with several components assembled together and with different functionalities (example of heat recovery of hot water from bathrooms or windows). There is the possibility to label either each component, or the entire system.

PPL comments that a points system will need viable and strong requirements. It has to be verifiable.

CL states that there is no need to solely consider complex products in using a points system - it can also work for simple products. But the issue may remain complex (e.g. material efficiency). Dismantlability, origin of materials, recycled-content can be aspects the points system can address. In the example of the local space heaters Energy Label, there is a possibility of significant emissions when using these products, but the label presently only provides information on energy performance. However, it would be preferable if consumers could use ecodesign and Energy Labelling to choose low-emission heating systems. Also, points could be given for longer lifetime (guarantees) when addressing material efficiency. Another example is in the battery for mobile phones: removable batteries are equivalent to a long-life guarantee for non-removable batteries.

According to RR, a reliable database is required to assign points, to establish the points system. If no good database is available, a good points system is not relevant. He refers to the existing points system for machine tools.

PW summarises the discussion. There is a need of evidence behind the points system to justify the points being given.

Jethro Schiansky (JS), Vorverk indicates that products are increasingly multi-functional and ever more sophisticated so why not apply ecodesign requirements to functions and not to a product class? Each time a new function is added to the

product, the requirements are checked. In his opinion, some kind of points system is necessary when products are multi-functional and diverse.

CL stressed that with a points system, comparison will be inevitable, both in B2B and B2C.

RK points out that if you only give a single score, it will be too simple (for a complex product). For B2B communication, the results require explanation, but they would enable end-users to usefully differentiate levels of product performance.

Erich Arens (EA), Kannegiesser, points out that there might be an issue with intellectual property rights (IPR). For customised products, the end-customer might not want to undergo an assessment process.

In reply, PW mentions that supply chain requirements by clients from providers, proven via Environmental Management Systems (EMSs), have been successful without compromising IPR.

FR points out that Ecodesign measures should be verifiable, define minimum criteria, and not be merely a marketing tool. They need to fulfil market surveillance criteria.

IM (VDMA) comments that different uses of the same products are not comparable.

CL says that currently points systems for simple products already exist. He gives the example of an electric heater and a ventilation unit. "Points" (i.e., a bonus "correction factor") are given for products incorporating a remote control, a programmable timer, etc. These are bonuses given within the remit of a single criterion (i.e., energy efficiency).

Should we go for a single or multiple criteria assessment (see question on slides 3 – discussion points).

ET explains that Ecodesign in fact means minimum requirements. A single score point systems would introduce some flexibility, as a product can be bad in some impact categories but this can be compensated for in other categories. If there is an agreed methodology for weighting we can apply it in the points system.

PW answers that in principle a points system can set a minimum requirement on each criteria as well as setting a minimum overall score to respect.

BS states that the BE ministry of environment is in favour of single criteria for energy and material efficiency. If you have the two requirements next to each other you cannot misinterpret.

PW asks: if there is a trade-off between energy efficiency and material efficiency (e.g. copper in transformers), is this a situation where you want to use a points system?

BS answers, yes, it can promote new material-efficient products.

IM explains that case studies will help the project team to define what is the right points system approach. Case studies will give you a view on which criteria make sense. Focusing on material efficiency is not possible now as the mandate with regards to material efficiency (standardisation Mandate) will be finalised by 2019. You cannot write something like this down in the points system, we have to wait for the mandate.

HPS mentions that this study should not focus on how you can combine different environmental impacts. The issue in this study is how you can deal with complex products. His suggestion is to take one parameter like energy efficiency and then check if the points system could be a solution via which minimum requirements could be set. Machine tools are an excellent example.

Should a points approach be used to help inform a decision making process for complex products (decision tree approach)? (slide 4) and in which stage of the process (slide 6)?

Floris Akkerman (FA) mentions that this is something that can be part of a preparatory study task 7. Here a simple ecodesign requirement could be compared with a points system. He is not in favour of using a points system within the preparatory study to rate the options as this raises complexity.

PW asks if it would be helpful if this study were to propose guidelines to "govern" when it would develop a points system approach, rather than e.g. an energy efficiency requirement, and in which step of the preparatory study this might best occur?

It was agreed by one of the stakeholders that this decision aid tree has to be developed during the preparatory study, and not at the stage of the Consultation Forum, as by then it would be too late.

Should a points system approach be used to help derive specific ecodesign requirements, generic ecodesign requirements or other type of Ecodesign requirements?

ET points out that generic ecodesign requirements are not quantified and therefore you cannot have a generic requirement based on a points system.

Another stakeholder points out that there is a separate annex on generic ecodesign requirements, a manufacturer has to prove that his design is better than the design put forward, so it is certainly quantifiable. A third type of requirement is not possible.

A stakeholder says that a points system is a way of combining generic and specific requirements by combining the points.

HPS suggests checking the Ecodesign Directive for the definition of "specific" and "generic" is advised, before further use of the wording.

6. Information on planned Case Studies

MB explained that a decision had been made to conduct case studies on machine tools and on data storage devices.

7. Next steps

The study will conclude at the end of February 2017.

A 2nd (and last) stakeholder consultation meeting is planned after sharing the draft report for Task 4 (on the case studies), i.e. before the end of 2016 (November or December).
Drafts will be shared on the website and stakeholders will be notified via email.
Stakeholders are invited to provide feedback on the draft report for Task 2 before mid-July.
Work to prepare Task 4 (case studies) is planned to begin in August. It is stressed that case studies are meant for, and will focus on, clarifying the design of a points system.

8. AOB

MP stated that CEN CENELEC will share this work on their website to provide more feedback on the Task 2 report.

Annex 3: Slides first stakeholder meeting

TASK 1 - FINDINGS FROM A SURVEY OF A SMALL NUMBER OF MEMBER STATE REPRESENTATIVES

1st Stakeholder meeting - June 30th 2016, Brussels

SURVEY NATURE AND OBJECTIVE

Characteristics

- Nature – a questionnaire was circulated followed up by interviews
- Purpose – to gain an initial impression of MS representative thoughts on the application of a points system approach
- 5 Member State representatives have completed this process
- There is still an opportunity to include 1 or 2 more
- Chatham House rules apply in processing and presentation of findings

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Q1.

Do you think it is necessary to establish a strict definition of what a complex product is in Ecodesign regulatory terms?

» No – "The answer assumes that "strict" means having no loopholes. However, the definition would be used to guide the decision whether for a certain product or system a points -system would be suitable"

"It may be too difficult and not worth the effort"

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Q1.

Do you think it is necessary to establish a strict definition of what a complex product is in Ecodesign regulatory terms?

» "There is a huge variety of (potential) complex products. This makes it difficult to find a very specific and strict definition for complex products. It seems more feasible to define a complex product by its general properties. In the context of the possible application of a points system however, it is necessary to have such a general definition in the sense of a common understanding, for which types of products a point system could be an appropriate regulation scheme and for which not."

Q2.

How would you define a complex product from an Ecodesign regulatory development perspective?

"A complex product

- does not provide a standard configuration / functional unit
- is often a customised product, adapted to a specific application,
- can have multiple functions,
- can be modular,
- can be finally installed at the user's site,

and/or

- can have different performance levels dependent on the operating conditions at the user's site
- can have functional parameters that are inherently difficult to measure

The definition of a complex product needs to be clearly distinguished from an extended product."

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Q2.

How would you define a complex product from an Ecodesign regulatory development perspective?

"A product that has one or more of the following characteristics:

- Product / system with more than one function (machine tools, washer driers)
- The performance is too dependent from the duty cycle (pumps, motors)
- Heterogeneous types of products (machine tools)
- Custom made products/systems/installations (machine tools, steam boilers, industrial ovens, large ventilation units, large boilers and heat-pumps, large chillers/heat-pumps)"

"Usually they are typically construction products that have to be installed, products systems e.g. business to business and data centres (enterprise servers), consumer electronics. Large professional products and tertiary lighting products.

When products are not sold as packages but as components"

Q2.

How would you define a complex product from an Ecodesign regulatory development perspective?

"A complex product is a collection of various parts (modules) that can be assessed separately, that allow for a large number of combinations where each combination of modules constitutes a product that has different functionalities/performances (to suit different needs of end-users).

Note: differentiation between modules could be done by software i.e. potentially diagnostic software could be applied to assess the functionalities and energy/resource efficiency of specific modules in each functional mode and to determine the apportionment of effort/time in each mode

Some further comments:

1) A product that can be used in various ways (for which different user profiles exist) need not be a complex product

2) A large product need not be a complex product, transformers can be very large but they are not complex products in the above definition.

3) A points-system can be oriented on functionalities/performance/efficiency but also on savings options

Q3.

Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

» No - not necessarily -perhaps two types of systems e.g. PEF looking across different env. impacts or machine tools looking only at energy impact (mono- impacts) - points based approaches could be applied to more simple products. E.g. a TV could be graded on its material efficiency – i.e. accounting for whether it uses less material, or uses recycled or bio-based materials or whether big plastic parts are labelled and compatible plastics can easily be separated

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Q3.

Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

- No - whenever needed, as identified during the preparatory study.
- Requirements based on a “kind of point systems” are already being applied for electric room heaters (2015/1186) and residential ventilation units (calculation of SEC, table 1 in eco-design requirements (2014/1253)
- One can consider that requirements for a “not-so-complex-product” are set using points for parameters where a trade-off may exist, i.e. Nox emissions and energy efficiency for a boiler. As requirements on resource efficiency become more common, this kind of point system will become increasingly needed.

Q3.

Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

- Unsure - As it seems that market surveillance can be more difficult in the case of the application of a points system and the environmental performance can't be described accurately and unequivocally, a points system should indeed only be applied if the product can't otherwise be treated under the Ecodesign Directive.

- On the other hand, there might be aspects, for which manufacturers need a certain design flexibility (e.g. aspects of material efficiency), for which a points system could be applied in a common regulation. When products finally are entering the preparatory study phase, the decision whether to apply a methodology for "complex products" has to be made on a case-by-case basis.

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Q3.

Assuming such a definition were in existence do you think points-based Ecodesign assessment methodologies should only be applied to such products?

- Yes - The words "point-based" seem to point to an evaluation system in between an ordinal system and an interval system: (assuming more is better) a product with 10 points is better than a product with 5 points, but it may not be twice as good
- Solutions on a ratio scale typically do not involve points. E.g. the efficiency of an electric motor driven unit can be calculated from the efficiency of the supply and control (VSD), the motor, the transmission (if applicable) and the fan or pump or whatever else is driven. In my opinion such a solution – if possible – is to be preferred above a points system

Q4.

In principle do you agree that the Ecodesign characteristics of complex products can be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

- Unsure - In principle, this will be possible. However, it may be difficult to define the specific function of each module, and the functions will interact with each other. This means that assessment of the modules is possible and can be highly accurate, but may not lead to meaningful information about the complete product. To ensure that, a calculation/weighting method would have to be designed and validated for each product group
- One needs to consider additionally that the applicability of ecodesign improvement options can in the case of complex customised products depend even more on the application area compared to other product groups regulated so far. E.g. in case of machine tools it has been discussed, that there are customised machine tools intended for production sites where it is known that they will run for 24 hours a day over the year. For such machines the installation of standby software does not provide improvements compared to machine tools which are only partly in use.

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Q4.

In principle do you agree that the Ecodesign characteristics of complex products can be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

- Yes - although this would be a circular argument were a complex product defined as a modular product
- For MTs could come up with a list of the most used applications that could be done with a certain efficiency. However, one operation might influence another operation (e.g. smoothed edge preforming might avoid a need to trim edges afterwards)
- In principle yes but with exceptions: one cannot expect that the drying efficiency of a washer dryer to be as high as of a dedicated dryer. Also, a combined washer drier will use less material

Q5.

What issues do you think would be encountered were the Ecodesign characteristics of complex products to be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

- "unsure how they will combined and could influence each other. Also could be technically difficult to assess independently. Could depend on how modular the software is. V. long processing change (e.g. a machine hall) - have machines from different producers with compatability issues"
- "To define the modules. To combine the individual assessments to a total assessment"

Q5.

What issues do you think would be encountered were the Ecodesign characteristics of complex products to be assessed in a modular manner (i.e. individually for each module that performs a specific function)?

- To our understanding for a complex product no single functional unit can be defined. Often the needs of the customer determine which functions can be provided by the product and which modules the product contains. Therefore it seems that a points system needs to be built-up on the possible functions and modules, thereby taking into account that probably lots of variations of the product with regard to modules and functions will exist
- There can be difficulties to define the specific function of each module, and the functions will interact with each other. Regulating modules may lead to some environmental benefits, but not necessarily to an optimal solution for the complex product

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Q6.

Within an Ecodesign context do you think that, at least for some products, it is viable to apportion functional units among modules that perform more than one function, as is done for example in the ISO 14955-1 standard for machine tools or in the "installer" energy labelling requirements for space and water heaters?

» Yes, It would have to be made if those products should be rated by a points system. However, this may be a difficult task. This approach can give an estimate of energy savings, but this will be inherently imprecise, as pointed out in the study. Therefore, the question may arise whether it is appropriate to set requirements on modules / products with low expected saving potential in this way, as it can be questionable that the outcome is beneficial in the majority of products

Q6.

Within an Ecodesign context do you think that, at least for some products, it is viable to apportion functional units among modules that perform more than one function, as is done for example in the ISO 14955-1 standard for machine tools or in the "installer" energy labelling requirements for space and water heaters?

- Yes, whenever it is appropriate and needed for the specific product/system
- Mentioned WM cycles - e.g. display technology - however, a difficult question as most products are mono-functional. Could come up in the lighting systems prep study.

Q7.

Multi-criteria points systems methodologies usually begin by establishing the set of (environmental) impact criteria to be assessed. Do you think any prospective points scheme to be applied to Ecodesign assessment of complex products should focus on key impact criteria first or should it analyse all impact criteria?

- All Criteria – At first, all environmental impacts should be assessed and the most important ones identified. In a second step one needs to decide, which of the important environmental impacts (key criteria) can be addressed separately with specific requirements (e.g. noise emissions) and which need to be treated within a points system, for which then the points system could be established. Another approach could be to define a minimum level for the environmental aspects for which it is possible (must criteria) and to combine this with additional improvement options for which points can be granted

Q7.

Multi-criteria points systems methodologies usually begin by establishing the set of (environmental) impact criteria to be assessed. Do you think any prospective points scheme to be applied to Ecodesign assessment of complex products should focus on key impact criteria first or should it analyse all impact criteria?

- Key Criteria - The "key impacts" should be determined during the preparatory study when applying the MEERP.
- Other - It would be most interesting to look at everything (e.g. EE, material efficiency, toxicity etc.); however, for energy related products there could be a focus on say energy impacts. However a pragmatic approach is needed. Looking at the PEF -multi-criteria can be difficult - its doing it in the right way but it's a challenge. Difficult to make the PEF accurate enough - mandate use of PEF for LCA claims but maybe too much to bind into Ecodesign regulations at present

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Q7.

Multi-criteria points systems methodologies usually begin by establishing the set of (environmental) impact criteria to be assessed. Do you think any prospective points scheme to be applied to Ecodesign assessment of complex products should focus on key impact criteria first or should it analyse all impact criteria?

- Other – This is an issue that is in my opinion not related to the issue of complex products. Also for simple products this question is valid. Luckily within Ecodesign this has been solved by establishing the MEErP that has selected the (key) environmental criteria used to assess the environmental impact of products
- So, unless it is the intention to evaluate/change the environmental criteria used in the MEErP (which I would not recommend) this issue is not applicable

Q8.

Multi-criteria points systems approaches often use grouping and weighting of impact (assessment) criteria to derive an overall score: do you think this would be a helpful approach for assessing the Ecodesign of complex products?

- It depends – I assume that the question relates to various performance criteria, this is only useful if consensus is found on this grouping and weighting.
- Note that the name "points-system" already points to an indicator that can be used across functionalities. If in such a system a product with functionality A gets 6 points and a product with functionality B gets 6 points, one would assume that these products are equally good.
- Unsure - PEF has merits but perhaps not when used in a multi-criteria approach. May be better to stay within a single criterion points based approach

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Q8.

Multi-criteria points systems approaches often use grouping and weighting of impact (assessment) criteria to derive an overall score: do you think this would be a helpful approach for assessing the Ecodesign of complex products?

- Yes – Grouping and weighting will be essential for a point scheme. However, care should be taken to ensure proper balancing of the environmental impacts. Otherwise, trade-offs could be used to undermine environment protection levels.
- Sensitivity analysis of weightings is important: What is the impact of decisions on the environment protection level and of the range of products?
- Yes – but it may be complemented with other requirements, i.e. it does not have to be the "unique overall score"

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Q9.

If weightings were to be applied, which method for determining the weightings do you think would be most appropriate?

- Panel method - Panel method works for the moment in the actual practice within CF and RC. Distance to Target
- It would help a great deal were a consultant to objectivise the discussion by giving some calculations for LLCC points - more difficult for multi-criteria. Material efficiency and waste treatment are key issues design impacts on how difficult it would be to recycle materials – can be assessed in I/O analysis and mass balancing – interesting to see if its possible to derive a LLCC for material efficiency

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Q9.

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- Panel method - In principle panel method but complemented whenever appropriate

Q9.

If weightings were to be applied, which method for determining the weightings do you think would be most appropriate?

- Panel method - The panel method seems to be the most applicable method.
- Monetisation based on CO2 could be applied if only energy efficiency is tackled. However it seems very difficult to analyse the final improvement potential for complex products and there might be a high uncertainty. This makes the application of monetisation or distance to target methods complicated or in some cases even impossible
- Other - In principle the weightings can be written in the legislation; on which method the weightings are based is less interesting. The process of getting it in the legislation assumes that various interests are taken into account

Q10.

Do you think it might be appropriate to only apply a weighted-points systems approach for the Ecodesign assessment of complex products to purely energy-related assessments, where the weighting is applied between the various modules that make up the device?

- No - Why should such a method only be applied to purely energy-related assessments?
- Weighted points should only be applied when more straightforward metrics are not available or appropriate
- In principle, each module and each function should achieve requirements and a minimum level. However functions or environmental impacts are not independent from each other - example air conditioners: less noise means less energy efficiency. Then impacts or requirements would have to be weighted. This bears danger of weak requirements due to (unexpected or in-transparent) trade-offs. It may make more sense - if applicable and appropriate - to set requirements for some environmental impacts separately and to use a points system for a single environmental impact only. However there might also be cases, where several environmental impacts can only be treated within a point system

Q10.

Do you think it might be appropriate to only apply a weighted-points systems approach for the Ecodesign assessment of complex products to purely energy-related assessments, where the weighting is applied between the various modules that make up the device?

- Yes – It is preferable to first consider mono criterion to fit them together to an end score rather than multi-criteria –
- if the mono-criterion approach works then extend it to multi-criteria in the future

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Q10.

Do you think it might be appropriate to only apply a weighted-points systems approach for the Ecodesign assessment of complex products to purely energy-related assessments, where the weighting is applied between the various modules that make up the device?

- Additional - In general, it might be difficult that a methodological study for a point system in general can foresee all characteristics which can be important for complex products
- It might be of help if the study develops a kind of procedure and decision tree, which provides clear guidance however also a certain flexibility for preparatory studies in order to be able to deal with the specifics of complex products

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Q11.

Multi-criteria assessment processes often use an Analytical Hierarchy Process methodological approach to establish a hierarchy between the criteria. Do you think this could be a viable tool for the Ecodesign assessment of complex products?

- Unsure - In principle yes, however we are unsure what Analytical Hierarchy Process applied to this context really means
- Yes - but much of the analysis will be done in the preparatory study and the specific procedure will be written down in the legislation, e.g. What are the possible modules? How are these defined? What characteristics need to be assessed/measured and how these are to be combined?

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Q12.

Do you think that a points systems approach has the potential to form a viable methodology for the development of Ecodesign requirements for complex products?

- Yes - points schemes have been successfully implemented for other purposes. In principle, they can be applied for Ecodesign as well – dependent on the way it is used, of course. The potential is there, the challenge will be in the decision about what parameters to award points for, which number of points to set as a minimum requirement and avoiding the introduction of wrong incentives
- Whenever a straightforward metric is not available or sufficient
- A potential but not demanding that it should be developed within 3 years. Study a good initiative but also asked Commission to put thoughts on paper re what a systems approach might be. Were not then talking about a points system but this was hinted at
- Yes, as points system it has greater flexibility to deal with non-ratio characteristics of products, e.g. the presence of certain features

Q13.

Do you think a points systems approach might be suited to setting generic Ecodesign requirements?

- Yes - But generic eco-design requirement so far have not been much used, nor are they very effective
- But needs a lot of work!
- Possibly, for example for resource efficiency requirements
- Requirements need to be as specific as possible in order to allow market surveillance to check if a product meets these requirements
- To our understanding a points system would establish a kind of third way to set requirements, this means actually one can't treat it precisely with the understanding of specific and generic requirements. It will not be really generic, as e.g. there is a need to set a requirement how many points need to be reached. On the other hand the reached points can't be used to describe the environmental performance of the product in a specific way

Q14.

Do you think a points systems approach might be suited to setting specific Ecodesign requirements?

- Yes - Would be the priority and could be developed in the short to medium term e.g. focus on installer for label for heating systems, none energy related aspects on material efficiency
- Unsure - There is a potential to set specific targets on improvements in a certain parameter using points systems. However, the problem of precision and verification remains with this approach

Q15.

Do you think a points systems approach applied to setting generic Ecodesign requirements for complex products might pose any specific challenges for market surveillance?

- No – They only thing that market surveillance authorities can check on generic requirements is whether the manufacturer has provided some information.
- Unsure

Q16.

Do you think a points systems approach applied to setting specific Ecodesign requirements for complex products might pose any specific challenges for market surveillance?

- Yes – Especially if expert assessment is involved in scoring points, this might decrease reproducibility
- Market surveillance for a point system of a complex product could be more laborious, as it could be necessary to check the conformity of each module. It all depends on the actual requirement and how it is verified. On the other hand, a specific requirement setting only simple parameters may make market surveillance of the individual modules possible, where the complete product's performance cannot be measured
- No – no explanation

Q17.

Which other possible issues do you foresee that could pose a problem to the application of a points-systems methodological approach to the setting of generic Ecodesign requirements?

- "Points systems are meant to make a complex task easier. While the actual requirements are set politically, using points may hide the complexity leading to unintended consequences not being spotted in time. Applying this approach can potentially lead to trivial or unverifiable requirements"
- "The weighting of impacts but once that is agreed it is ok. Aggregating and normalisation are more technical – need some kind of database with life cycle inventories (technical challenge) and some kind of certified software or one specific software tool to do calculations.
- Prefer to start with labelling here as its softer and less severe implication if there is a problem with the limits proposed. Step by step approach
- Might be more appropriate for non-energy related due to differences in energy mixes"

Q18.

Which other possible issues do you foresee that could pose a problem to the application of a points-systems methodological approach to the setting of specific Ecodesign requirements?

- "Prefer to start with labelling here as its softer and less severe implication if there is a problem with the limits proposed. Step by step approach"
- "Depending on the complexity of the points system chosen for a product group, the decision problem may not be smaller than in the "traditional" approach. There is a risk of creating regulations to cover all aspects because it seems easy using points"

Q19.

What guidance, advice or possible alternative approaches would you offer for the continuation of this research exercise?

- "The approach seems appropriate"
- "For eco-design a points-system does not necessarily need to result in one (overall) score
- After having read the report, I suggest to spend some more time on analysing what is a complex product (in the framework of eco-design/energy labelling). There is more to say about this than the two criteria that are now mentioned (more than one functional unit, functionality difficult to assess), and these criteria alone do not give much guidance for development of a methodology. I doubt whether it is useful to look more into LCA (type of) methodologies; and you described the problems of these methodologies already quite well"

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Q19.

What guidance, advice or possible alternative approaches would you offer for the continuation of this research exercise?

- "Focus on non-multi criterion approach. On energy efficiency or material efficiency. Keep in mind labelling. Windows, drives/pumps, lighting, taps/showerheads. Building components - that allow evaluation of this maybe"
- "A flexible approach could make sense, i.e. to apply a points system to one or a number of environmental aspects only and to set classic requirements to other aspects"

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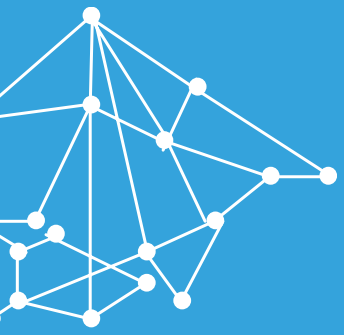

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