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 From : Paul Van Tichelen Annex(es): Powerpoint presentation of the meeting see:  
<https://ecodesignbacs.eu/documents>  
 To : Georgios Takoudis  
 Copy : All registered on the website

## Minutes of stakeholder Meeting for Ecodesign Preparatory Study on BACS – First Stakeholder Meeting on 03/03/2020

### Location:

Albert Borschette Conference Center Rue Froissart 36 - Brussels - room 5B

### Participants:

**European Commission:**

DG ENER

Georgios Takoudis (GT)

**Project Team:**

VITO

Paul Van Tichelen (PVT)

RICARDO

Alan Mc Cullough (AM)

WAIDE

Paul Waide (PW)

**Stakeholders:**

Company / organisation name	present	Acronym
Aereco	x	Aereco
Afecor/EHI	x	Afecor/EHI
BEAMA	x	BEAMA
BELIMO Automation AG	x	BELIMO Automation AG
CECAPI	x	CECAPI
Danfoss	x	Danfoss-DV
Danfoss	x	Danfoss-GN
Danfoss	x	Danfoss-TS
E.V.V.E.	x	E.V.V.E.
ECOS	x	ECOS-B
ECOS	x	ECOS-O
EHPA	x	EHPA-A
EHPA	x	EHPA-B
EPEE	x	EPEE-T
EU AMCA	x	EU AMCA
eu.bac	x	eu.bac
eu.bac	x	eu.bac-PH

European Heating Industry (EHI)	x	EHI
European Ventilation Industry Association	x	EVIA-A
Federation of German Heating Industry	x	BDH
GCP Europe	x	GCP
KNX	x	KNX
Korea Electronics Association	(x)	Korea
Kreab	x	Kreab
LG	(x)	LG
Lighting Europe	x	LE-D
Lighting Europe	x	LE-ML
LightingEurope	x	LE-F
Mitsubishi Electric Europe	x	ME
Netherlands Enterprise Agency	x	NL
Norwegian Water Resources and Energy Directorate	x	NO
nVent on behalf of EUHA	x	nVent
Panasonic Europe BV	x	Pan
REHVA	(x)	REHVA
Schneider Electric	x	SE
Siemens / eu.bac	x	eu.bac-S
SOMFY ACTIVITES SA	(x)	SOMFY
Techlink	x	Techlink
Umweltbundesamt	x	DE
Volta vzw	x	Volta
WindowMaster International	x	WM
Taylor Marvin	x	MT

(x) = registered but did not sign the attendants list

## Minutes

### 10h00-10h05: Welcome and introduction to study (DG ENER)

Georgios Takoudis (GT), commission official in charge of this ecodesign study, welcomed the participants and explained the context of this meeting.

### 10h05-10h15: Tour de table and introduction (VITO)

PVT mentioned the study will not address zoning because the study focuses on concrete products rather than system design.

### 10h15-10h30: Overview of draft Task 1 work (VITO): see powerpoint presentation

**10h30-10h50: Task 1 Q&A on functional unit and scope**

Acronym	Question(Q)/Answer(A)/Statement(S)
NL	S: Noted that functional unit relate the comfort requirements from the standards but as he understands it one advantage with sophisticated BACs is that individual preferences can be catered for rather than everyone having the default values within these standards, and asked how this can be taken into account.
PVT	A: We recognize this and might have a large potential because the standards have comfort levels that satisfy most user (>90 %) and not tailored to spreading in user preferences. The problem is that there is not data to model this. For the moment we can refer to this as BNAT in Task 4, it was also mentioned in Lot37 for lighting where a large spreading in user preferences is likely.
ECOS	Q: Agreed that the main focus should be indirect energy consumption but asked why self-consumption for non-energy related functions is not within this main focus
PVT	A: Said that the swiss study likely overestimated self-consumption for BACS because it included consumption that is already covered by other Ecodesign measures for example lamp ballasts and so-far we found very little data in literature. From this lack of data we concluded that self-consumption is unlikely to be an issue otherwise it should already have been more measured and reported. Nevertheless, we will take it into account to the extent possible. Non-energy related functions are out of scope due to time constraints, see also later statement of EU.BAC on this. Note, added after the meeting: this would result in a different functional unit and therefore study (e.g. Lot 6).
DE	Q: If there is no more data about the non-energy related BACS
PVT	A: Agreed that this would be helpful to clear this out but so far we miss this data and definitions
EU.BAC	Q: To what non-energy related BACS functions would refers? because in their view all BACS functions are energy related
NL	S: Said that might be grey area of non-energy related BACS with security functions and also for example human interfaces when for example smart phones are used
PVT	A: This is for example the door contact that can play a role for ventilation control but also for security. Agreed that we need to illustrate and clarify this area over overlap in hardware more. He also informed that there is a new pending study on smartphones, they can play clearly a role as user interface for BACS but their Ecodesign measures are out of the scope of this study.
AM	A: In Task 4 the report begins to discuss how to take non-energy related aspects e.g. telecoms run through the BACS systems, out of the system boundary analysis. Invited views on this.
DE	Q: According to them self-consumption is an important aspect also for the EPBD but he questioned what additional self-consumption is referring to instead of total.
AM/PVT	A: This concept will be elaborated in Task 4.
DE	S: Does not see exactly what components are in a BACS and for Ecodesign Regulation because we need some products where a CE marking is given to. This will also need to have a bill of products for the base case, BAT and BNAT.
PVT	A: Noted
WM	S: Address using EN15232 as it doesn't reflect every type of BACS, especially control on natural ventilation. They will provide inputs for use in the study.
PVT	A: This would be welcome but also noted that if some gaps are identified in EN 15232 we can report them to the EC. This will allow them to be considered in the next review. Hence please note any EN 15232 gaps for the report.

**11h00-11h20: Overview of initial draft Task 2 work (Waide):** see powerpoint presentation

**11h20-11h50: Overview of initial draft Task 3 work (VITO):** see powerpoint presentation

11h50-12h00: coffee break

**12h10-12h30: Overview of initial draft Task 4 work (Ricardo):** see powerpoint presentation

**12h30-12h50: Overview of initial draft Task 5 work (VITO):** see powerpoint presentation

12h50-14h00: Lunch Break

**14h00-14h20: Discussion on the base case selections (VITO)**

Acronym	Question(Q)/answer(A)/Statement(S)
PVT	S: Highlighted that for the reasons given the BC1(residential) and BC3(residential) might be relatively well insulated
Danfoss	S: The base cases should reflect the building stock in Europe – if the shoebox is overly insulated it won't represent the building stock and underestimate the potential
PW	A: Proposed to review data in the BSO(building stock observatory) and the studies reported in the SRI to get a better view but also asked stakeholders to review this assumption and report their views, noting that if we are to depart from the value used in the EN standard we need to justify it
PVT	S: If people have still opinion on this please sent them before the Task 3 comment deadline (20/3) because this will have a large impact on the calculations which can't be postponed given the study plan deadlines. If you have an opinion on this please also provide the underlying evidence with it.

**14h20-14h40: Discussion of approach and applicable market data to scale-up the base cases to derive the EU27 impact (Waide/VITO)**

Acronym	Question(Q)/answer(A)/Statement(S)
	There were no questions or comments from stakeholders on the Task 2 discussion.
PW	S: He will send out a survey soon to collect data and mentioned that data will be kept confidential and aggregated before being published

**14h30-14h50: Discussion of selected improvement options for Task 4/6 (Ricardo/VITO)**

Acronym	Question(Q)/answer(A)/Statement(S)
AM	S: Outlined the issues or discussion and also raised the question: are hardwired used in new build and will wireless tend to be retrofit?
UBA	Q: Are you going to calculate the lifecycle cost for class C and A but for LLCC more than two options will be calculated so we wouldn't know where the LLCC level is?
PVT	A: Answered that this is indeed different from other studies but here we consider rather more base cases. For BC1 and its improvement option this can be considered and a good suggestion, e.g. 0.5°C and 1 °C but for other base cases it might not be obvious.
MT	S: Hard wired solutions might have some security and emergency benefits.
AM	A: Using wireless sensors for temperatures where it's too expensive to install

	hardwired systems in smaller buildings. He would value stakeholder views on whether we should consider wireless versus hardwired solutions as a distinction
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### 14h50-15h20: Discussion of approach and data sources to model improvement options for Task 4/6 including life time and self-consumption(Ricardo/VITO)

Acronym	Question(Q)/Answer(A)/Statement(S)
Danfoss	Q: To what extent are the BACS simulated rather than the building needs?
PVT	A: Said that so far the distribution losses are indeed not modelled in detail but based on literature and simple assumptions. He agreed that in theory losses in the hydronic or air duct work for ventilation could be entered but this is a huge work and uncertain if this will properly work. If someone could help with that it could be very useful. Also, we don't have a VRF circuit and it would be useful to have model results for them too. If modelling cannot be done we could apply factors taken from the literature.
NL	S: The LLCC it is mostly applied is you want to set ED quantitative requirements; the way we describe it would be set at BACS system performance level. When it matters information requirements or functionality it is unlikely useful. S: if the EC is to come forward with policy measures then more work would be needed to define the BACS product.
PVT	S: Noted and mentioned that for a small set of functions there could be a threshold with a minimum requirement to define, for example temperature accuracy (BC1).
Danfoss	Q: Concerning control accuracy, line 218 of Task 4, mentioned that Digital controllers are controlling more accurately than mechanical ones – from their experience it is not so simple. Are we looking for a technology neutral approach as required under ED?
AM	A: Said EN15232 is written mostly in a technology neutral way but the highest accuracy levels effectively depend on the use of digital technology. In any case we will use technology neutral wording. EN51316-2 has the table of control accuracy. EN15500 has the measurement method. If there are aspects that are incorrect in these standards please inform us and we could propose they are looked at.
Eu.bac	S: Can provide us the room control test accuracy data that they test in their certification scheme (they have 160 test reports they can provide).
PVT	A: Welcomed this and said that for product prices we will check the price differences for this
AM	S: Moved on to the improvement options, but asked if there are things we are missing in our model? No comments received in the meeting but asked people to provide feedback by email.
PVT	S: Mentioned we don't have options and data for interlock between heating/cooling and typical VRF and dehumidification (latent heat recovery) but would welcome input from others on these if they have.

15h20-15h30: coffee break

15h30-16h00: AOB (all)

Acronym	Question(Q)/Answer(A)/Statement(S)
PVT	Q: Asked for opinions on demand side management (DSM) and interoperability, especially for heat pumps and water storage tanks. For examples and the format to make proposals he referred to requirements proposed in Task 7 of the Ecodesign PV

	<p>study that was recently completed. Are there minimum interoperability requirements that could be specified especially on the interfacing?</p> <p>S: He also mentioned that we can likely only specify the interfacing and interoperability but not an algorithm or method. This because business cases for DSM will likely to be local rather than European, especially when they involve grid services which are specified by the local grid operators or local authorities for electricity taxes and levies.</p>
NL	<p>Q: If we are talking about BACS controlling installations and appliances then if they are controlling appliances then we also could use that function for DR implicitly? If that is correct then we needn't concern ourselves with it.</p>
PVT	<p>A: Agreed that it could be a side issue with lower importance and not really a concern.</p> <p>S: Said that nevertheless we still could focus in listing a set of suitable protocols. One approach for a regulation hereby could be to specify a set of viable options and if anyone is present it would satisfy the minimum requirements</p>
EVIA	<p>S: His feeling is that trying to put non-residential, small residential and larger residential into the same area but is not sure that's possible. Maybe it's not one ontology and protocol but rather distinguished between residential and non-residential</p>
PVT	<p>S: Thinks that multiple ontologies may be needed</p>
NL	<p>S: Was arguing we should not delve too deeply into this as it would need a separate study. If a box can dim the lighting in the room we needn't ask why it is done as the functionality could be applied for DR or energy saving</p>
Taylor	<p>S: In partial agreement with the NL. Mentioned that there are some standardization committees that are looking to develop standards in these areas – e.g. smart cities, smart grids, smart appliances, so perhaps this study could help to understand how these standards could feed into these regulations. Another observation he's interested to understand some of the horizontal issues – heat pumps, PV, batteries – how are they going to be incorporated into the regulations. A final point is that he hasn't seen any analysis of solar thermal and would imagine this could be relevant in warmer climates</p>
PVT	<p>A: It will be</p>

### 16h00-16h15: conclusions and next steps (VITO/DG ENER)

Acronym	Question(Q)/Answer(A)/Statement(S)
PVT	<p>S: set out the timing and inputs requested, see therefore also on the documents section of the project website. The planning on the website will be updated with the new timeline presented in the meeting.</p> <p>It is important that stakeholders that wish to <b>contribute with data and simulations inform us before 30th of March</b> so that we can incorporate this in the planning of April to mid-June for including this input into Tasks 4-6.</p> <p><b>Comments on the selected base cases</b> and Task 3 should reach us <b>before 20th of March</b> because they have a strong impact on the subsequent calculation work.</p> <p>We will circulate the survey in April for Task 2 market data and a NDA can be supplied if one asks for it.</p>