**Eco Design Preparatory Study**

**Building Automation Control Systems (BACS)**

**First stakeholder meeting notes**

**17th Jan 2018**

Please refer to the slides for full details of what was covered in the meeting.

The key objective for Task 0 is to identify the scope of the study. The slides include a diagram (slide 16) explaining the domains of a BACS product. BEAMA are requesting this is accompanied with additional explanation.

General agreement at the meeting that the study should focus on energy related impacts, including flexibility and energy efficiency. But focus should remain on energy. The EU Commission rep attending said that the study should review demand side flexibility and energy efficiency, this would otherwise be a missed opportunity. The Clean Energy Package will set the market conditions for flexibility services.

The Commission and consultants made it clear that this study is very much linked to the work ongoing under Eco Design Lot 33 (Smart Appliances) and the EPBD (SRI).

EPBD will drive the rollout of BACS through:

* Related EPCs and minimum performance standards- BACS can be taken into account by EN 15232
* Smart Readiness Indicator is elaborated in a separate study: <https://smartreadinessindicator.eu/>
* Article 8 on Technical building systems (2010/31/EU): ‘.. encourage the introduction of intelligent metering systems whenever a building is constructed or undergoes major renovation, encourage…, the installation of active control systems such as automation, control and monitoring systems that aim to save energy.’
* Article 14 on Inspection of heating systems: ‘..regular inspection..
* Article 14 new proposal for heating systems: As an alternative to paragraph 1 Member States may set requirements to ensure that non-residential buildings with total primary energy use of over 250 MWh per year are equipped with building automation and control systems
* Article 15 on of air-conditioning systems: ‘..regular inspection

The consultants highlighted related Eco design lots, that could feed into any desired outcome to the BACS study. This includes energy labelling of space heaters, combination heaters, packages of space heater, temperature control and solar device and package of combination heater, temperature control and solar device, and of water heaters, hot water storage tanks and packages of water heater and solar devices (reg (EU) No 811 & 812/2013. This provides dealers to provide a package label when selling a space heater and combining it with a control. Provide a package label when selling a water heater and combining it with a solar device. This could set a precedent with what could be done for BACS.

They outlined what they believe to be the typical energy related domains of BACS:

* Heating control, e.g. emission control, control of distribution pumps, generator control
* Domestic hot water (DHW) supply, e.g. reduce stand by losses by forecasted demand
* For cooling, e.g. emission control, interlock between heating and cooling
* For air supply or ventilation (if any): demand driven, free air night time cooling
* Lighting controls: occupancy, daylight
* Blind control: prevent overheating and reduce glare
* Technical building management (TBM) system e.g
* Set point management, e.g. night time set back temperature
* Run time management e.g. schedule
* Manage local DER or CHP
* Control of thermal storage (if any)
* Smart Grid integration / Central Energy Management (CEM)
* Detect faults in the technical Building System (TBS)
* Reporting regarding energy consumption relative to indoor conditions

Concept of the potential BACS MEErP model



The consultants admit that it’s not clear how the MEErP can be applied on a heterogenous product group with multiple functions and this will be the main challenge for the study. There is some suggestion to split the study, but building size/ type (residential and non-residential), and scope (energy efficiency and DSR). While we can see merit in this approach we don’t think it would work to deliver two tiers of the study and any consequential policy options in a staged approach, this could create confusion for consumers and make life difficult for manufactures and providers of BACS.

Standard 15232 - within this BACS standard there are 50 services defined for BACs. There are a lot of reference cases just in reviewing energy efficiency. Looking at this the consultants are wondering how they can condense this down to core services / what matters for the scope of the study? The consultants propose that breaking the study up will help to manage the complexity.