Position paper on the scope of Ecodesign Lot 33 DG ENER

Preparatory study 'Smart appliances'

Brussels, November 2015

eu.bac recommendations on Lot 33

In order to grasp the full potential of both energy efficiency and demand side flexibility in the EU energy system, eu.bac recommends that the Commission includes building automation and controls in the preparatory study on smart appliances.

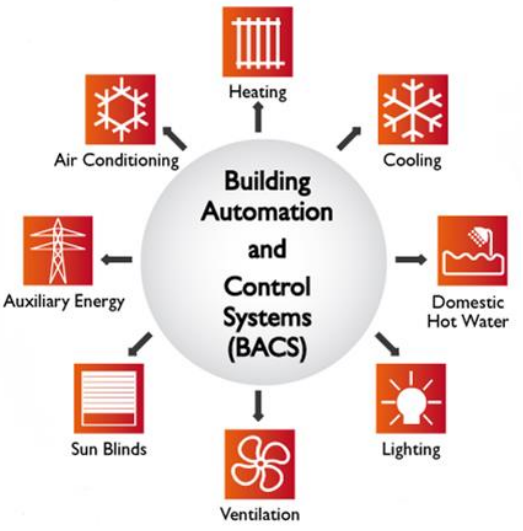
Focusing on stand-alone smart appliances will certainly achieve benefits for consumers, but these will be considerably limited compared to the added-value that can be brought by integrating building automation and controls, which also contribute to significant gains in energy efficiency. In addition, this also represents a considerable risk that the grid eventually becomes fragmented.

Furthermore, it would be beneficial to include self-consumption of on-site generated energy from renewables (e.g. PV panels) in the models and simulation. It is important to take this issue into consideration because it compensates energy losses due to charge cycles of storage systems.

Demand side flexibility and demand side energy efficiency

The background to eu.bac`s request is that although the flexibility that can be achieved on the demand side with the use of smart appliances has a positive impact on the environment through peak load shaving and by balancing energy demand with supply from renewable energy sources, shifting energy use to a different time of day doesn`t achieve energy efficiency, it merely leads to cheaper and slightly cleaner energy. To achieve demand side energy efficiency one has to ensure optimisation of energy use. This is one of the functions of building automation and controls: energy is used only when and where necessary.

eu.bac understands the rationale to individually enable standalone appliances (end devices), mostly white goods. Nevertheless, 'appliances' that are components of technical building systems should be addressed via building automation and controls. This is valid in particular for the non-residential sector, since the behaviour and use patterns are deterministic (building automation can calculate/forecast demands), but is also true for residential buildings, even though the behaviour and use patterns are more stochastic. By enabling demand side flexibility at system level, the indoor environment quality (with direct impact on health, comfort, productivity and well-being) is maintained and sub-optimal use of energy is prevented.



Technical building systems represent a high potential for demand side energy efficiency and flexibility in both non-residential and residential buildings (e.g. self-consumption of on-site generated energy from renewables, water storage for heating and cooling systems at building level). Furthermore, it is important to note that smart meters are meant for metering and billing. They are one piece of the smart energy system puzzle, but have limited functionalities compared to building energy management system/home energy managements systems. It is therefore key that their capabilities are well understood.

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Scope of Lot 33 DG ENER preparatory study as is after 2nd stakeholder meeting 19 November 2015

Energy efficiency in use phase is out of the scope of this preparatory study, however demand side flexibility (demand response) functionalities of residential sector appliances (end devices) and of two non-residential sector cases – i.e. commercial refrigeration appliances and heating, ventilation and air conditioning (HVAC) in tertiary sector are included due to their environmental impact. The scope of smart appliances in the study is strictly limited to demand side flexibility (demand response) functionalities.

About eu.bac

eu.bac is the European Building Automation and Controls Association. It represents the major European manufacturers of products and systems for home and building automation. Its vision is a world where energy efficient, sustainable, healthy and comfortable buildings are achieved through the optimal application of home and building controls, automation systems and services. eu.bac has founded the European Association of Energy Services Companies (eu.esco) for promoting Energy Performance Contracting as the economically sustainable solution for improving the energy performance of existing buildings using the guaranteed energy savings to pay for the installation. For a full and updated overview of our membership, please see www.eubac.org.

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