Building automation and controls grasp the full potential of energy efficiency and flexibility of HVAC in residential and non-residential buildings

eu.bac understands the rationale to individually enable standalone appliances i.e. dishwashers, washing machines, tumble dryers, refrigerators and freezers (residential) and electric storage water heaters. Nevertheless, ‘appliances’ that are components of technical building systems, and interact to achieve a common desired result e.g. comfort temperature (i.e. HVAC in residential and tertiary buildings), are already controlled by a form of building automation technology. Therefore, the latter would easily be DSF (demand side flexible) enabled at system level via building automation and controls systems.

Building automation and controls are already enabling the energy efficiency functions of technical building systems. The DSF function represents just one of the functions of building automation and control systems. 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.

As identified in Task 6, HVAC in residential and tertiary buildings represents the biggest potential when enabled at system level (i.e. with water storage for heating and cooling systems). Furthermore, by enabling more often demand side flexibility at system level via building automation and controls the minimum down time constraints are restricted or removed, the indoor environment quality (with direct impact on health, comfort, productivity and well-being) is maintained and the energy use is continuously optimized.

eu.bac recommendations on Task 7

Considering the before mentioned and the gradual transformation of the EU building stock into “smart buildings” in the longer term, eu.bac recommends the following:

- Ensure a level playing field and ‘healthy’ competition by leaving the DSF capability/interoperability to be enabled at individual product level (e.g. DSF dishwasher) or at system/building level (e.g. building automation and control system DSF function for heating/cooling system);
- Allow the national electricity markets to evolve in their own rhythm by creating a non-mandatory European DSF capable/interoperable framework e.g. standards -> test procedures -> certification (database of certified DSF products/ BACS DSF function);
- Raise awareness by developing a DSF capable/interoperable label for both before mentioned DSF capability/interoperability enabling options - functional approach. This label should be separate from the current energy labelling regulations because the DSF capability/interoperability does not provide additional energy efficiency. As such the Commission avoids confusing markets/consumers. The periodical rescaling of the energy labels is burden enough.
Position paper on Task 7 Policy Options
DG ENER’s Ecodesign Lot 33 Prep. Study ‘Smart appliances’
Brussels, 29th June 2016

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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