



IEA EBC Annex 71

**Building energy performance assessment  
based on in-situ measurements**

Closing session

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- Introduction by operating agent of Annex 71
- Session 1 – Assessment and assurance of energy consumption in the building sector
- Session 2 – On site measurements in the context of the regulatory assessment of the energy performance of new buildings

Annex 71 ST4 will look at further applications

- What are applications of on board measurements?
- Who are the users?
- What is the accuracy needed for them?
- What is the acceptable cost?
- What are the constraints?



YOUR input and ideas are welcome on our input sheets!



Quality assessments should be

- done in an objective way
- based on international standards, technical specifications, ...
- which are all based on international technical research and consensus within official organisations involving all interested parties (public authorities, private consumers, architects, engineers, contractors, producers, experts, laboratories, ...)



The development of an international standard should be handling all steps of

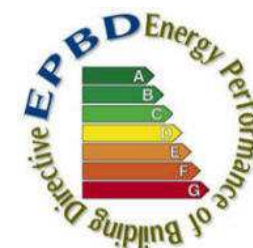
- performing on-site measurements and data analysis
- using these for a quality assessment
- taking into account the measurement and modelling errors and calibration needs for measurement devices



It seems to be important to

- determine boundary conditions and a normalisation method
- that measurers themselves, contractors and inhabitants cannot influence the measurement results by their building use and temporary improvements of the building
- have a legal basis and regulations based on proportionality on the type of organisations that are allowed to do such measurements

- EPBD calculations can be (partly) replaced by on site measurements
- This might be useful for (amongst others) innovative buildings
- Designers of innovative buildings often suffer that the calculation methodology of EPBD is negatively influencing the calculated energy efficiency
- On site measurements can proof the enhanced energy efficiency
- Also regular buildings would benefit from a measurement instead of a calculation approach. Boundary conditions used for calculations would be replaced by real time conditions which improves the accuracy of the (partly) calculated overall heat loss coefficient and/or energy use.



- An (inter)national energy label, voluntary or not
- Attestation based on the measured heat loss coefficient and/or energy use
- Such a label can stimulate the enhanced attention which is paid on construction quality
- Marketing of such a label will be crucial since voluntary labels tend to be unattractive







- Contractors of low energy buildings can be certified in order to establish trust in their work
- On site measurements can be used as inspection tool to check whether the obtained heat loss of the building is sufficiently close to the designed value
- This can be valuable for the contractor as a powerful marketing tool. The attention given to the construction quality can be paid off this way



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