

[CT4 – Procedures]



Warsaw, 10-11 December 2007 | Lyon, 19-20 May 2008 | Prague, 1-2 December 2008 |

Berlin, 15-16 June 2009 | Amsterdam, 21-22 January 2010

Summary

The core theme “Methods and procedural aspects for energy performance characterisation” compared and discussed national approaches for many different topics, ranging from definitions, occurrences and national roadmaps for near zero energy or high performance buildings to comparison studies for national energy performance requirements, advances in national procedures and their software application, procedures and benchmarks for measured energy performance rating and feasibility analysis of alternative systems.

Specific issues included thermal bridges, infrared thermography, how to give energy efficiency recommendations for complex buildings and climate normalisation methods for heating and cooling. Still ongoing, among others, is the analysis of how EU Member States (MS) fix their minimum energy performance requirements.



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Action II ◀

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Lessons learned

The major lessons learned, during the period December 2007 until January 2010, can be summarised as follows:

- High performance buildings are named and defined differently in the Member States. Most of the available definitions do not take into account national calculation procedures.
- Experiences made with intercomparisons of national requirement levels showed that meaningful conclusions are almost impossible to make as there is currently no robust, simple and fair comparison method available. This could become even more complicated if cost aspects are added.
- Due to reasons of practicability and desired independency, CEN standards are not transferred one-to-one into the national procedures. Instead, the content is incorporated into the national documents in a pragmatic manner. However, this introduces variability that may make intercomparisons more difficult.
- Weather normalisation is a crucial task for measured data and for comparing calculated data. The error made by simply correcting the heating and cooling energy needs by degree days increases in high performance buildings.
- Assignment of meters, division into different uses, suitable benchmarks, normalisation and derivation of recommendations are challenges in connection with measured energy rating.
- Most national procedures are applied as software programs. Only about half of the Member States have provisions for the accreditation of EPBD software.

Important recommendations

Important recommendations are already detected:

- There is a strong need for harmonization of terms and definitions for nearly zero energy or emission buildings, including a comparison with national energy performance ratings.
- Definitions should not limit the range of technological options and innovation to meet performance requirements.
- Parallel certification schemes (e.g, high performance buildings, alternative design certificates, etc.) always result in market confusion and this practice needs to be absolutely avoided.
- For correctly comparing national energy performance requirements not only technical and climate conditions have to be regarded, but also costs, traditional building styles and user behaviour.
- CEN standards should be developed into general framework documents that fix general principles only and allow a maximum of flexibility for Member States.
- A correct and European-wide harmonised approach for the climate normalisation for both heating and cooling would simplify the intercomparison of national requirements, as well as the use of measured energy ratings.
- Guidelines and minimum requirements for a correct procedure for measured energy rating should be developed.
- For calculated energy rating, simplifications are needed for some methods whereas other methods need to become more detailed to produce reliable results with acceptable accuracy.
- Member States should include thermal bridges in the energy performance calculations for all new and all existing buildings undergoing major renovations.

For more detailed information, see the [extended summary](#) report on this topic (soon to be available)