The need for a second mandate for CEN standards in support of the recast EPBD and update of the current set of EPBD standards.

Workplan & Procedures for the development of the 2nd generation CEN-EPBD standards

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Result of the first mandate (2003/2004)

- Forming a pyramid structure

Most are used in many MS, but “in a practical way”
EP:
Overall Energy Performance of the building including its technical building systems

- Boundary conditions
- Collect all energy elements
- Building energy needs and system energy losses
- Component input data
- EP aggregation
- EP expressions
- Common terms, definitions and symbols
Quality of first mandate EPBD standards?

- Consistency (structure and levels of detail) not ideal
- Causes:
  - Timeschedule was extremely tight: flying start required (MS req in 2004 = start of CEN work)
  - Not all work started from scratch
  - Many MS had, at the time, no or little experience with overall EP requirements  various options needed to accommodate different expectations
  - Subsidiarity principle in EPBD: implementation not mandatory

Some of MS’s needed the standards by 2004/5 others 2007/8
Actual situation: How are the CEN-EPBD standards implemented in practice?

Actual situation

- CEN-EPBD standards are used in many EU Member States in a “practical way”: by copying parts of CEN standards into national standards or building codes and adding national elements.

Some of the main reasons:

- Phase difference: MS’s needed the EN’s earlier (Some of MS’s needed the standards by 2004/5 others by 2007/8)
- Need at national level for a combined “all in one” document: preference for legislators to refer to one or a limited amount of standards
- Initially (2004-2005): uncertainty & wide variety of requirements from the Member States
Starting point

• Extensive feed back organised within the IEE-CENSE project (2007-2010)
  – Including extensive contacts with persons responsible for EPBD implementation in MS’s
  – Report from the Concerted Action-CEN Working group

• Contacts with EC, JRC, CEN, Concerted Action-2, Eurocodes, ISO, et al

• Discussion in EDMC meeting June 3\textsuperscript{rd} 2010 and CEN-CA2-meeting Ljubljana 23\textsuperscript{rd} Sept.
Conclusion on standards

- CEN EPBD standards need to be revised to be fit for more direct use:
  - More modular and unambiguous
  - Clear split common method <versus> national choices e.g. : Climate data, primary energy factors, the expression of ventilation and other legal requirements.
  - Software proof

- More consistent and in line with specifications to be specified by the Member States
Positive Impact of 2\textsuperscript{nd} generation of CEN-EPBD standards (1)

- CEN standards more usable as direct reference & high transparency in national choices
- Easier international knowledge exchange and shared research
- Increased circulation of products, services and property (real estate) data
  - Towards more EU product data coupled to EP calculations
  - Towards less use of confusing national or non-EU labels…
  - More uniform info on quality of building stock
Impact of 2\textsuperscript{nd} generation of CEN-EPBD standards (2)

- Faster implementation of new solutions
  - Better comparable energy performance levels and impact of innovations
- Increased credibility of EU in the world
  - Retaining the initiative in the global arena
- EPBD Recast ready
  - Existing buildings
  - Meet art 8 issues
  - Nearly zero energy buildings
- Ultimate goal: High performance European tools leading to high performance buildings
Stronger position of the EU industry on a global market by using harmonised procedures

• EU producers need harmonised procedures to evaluate the energy impact of their product in EU
• The (improved) CEN EPBD standards make this (better) possible, if applied in a transparent way by all EU-MS
• This harmonisation will lead to a stronger position of the EU-producers on the global market
• By developing ISO standards in parallel, this frontrunner position of the EU producers could even be strengthened
2nd Mandate to CEN

- A second generation EPBD standards is needed
- To achieve this in a reasonable timeframe with active participation of EU experts a 2nd Mandate to CEN is needed
- All parties consulted support this request
- The preparation of a 2nd Mandate to CEN is on track and expected by November 2010!
- A serious involvement of EU MS experts can be facilitated by the proposed structure.
Timing for revision

• Reasonable timescale for implementing harmonized approach?
• Majority of Member States require the total new set of EPBD standards: roughly between 2014 and 2020
• Phased approach
Phase 1 (2010-2011):

- Preparation of format **guidelines** and **common technical rules**
  - Together with MS
  - Based on the overall requirements & expectations on the standards
- Development of an **overall modular structure** (~ basic standard)
- Set up **specific operational procedures** for cooperation with MS, within CEN and with ISO
  - Satisfying the different **roles**, but respecting the formal **rules** (e.g. CEN rules)

*This is essential, before decisions can be made on the kind of revisions per standard (2011-2014)*

Phase 2 (2011-2014):

- Revision of the existing set of standards
  - In order of priority
Phases / Work packages

1A. Set up of organisation and communication
1B. Continuous coordination, monitoring and communication

2A. To work out detailed guidelines and procedures for revision of the standards
2B. Continuing monitoring/execution of guidelines / procedures during the project

3. To prepare a continuous but modular structure (e.g. as basic standard)

4A&B. Following a scheme with priorities: to convert the existing standards and (where necessary) to add missing ones
Tentative timeschedule

**Detailed workplan phase 1**
- Draft Policy guidelines, procedures and rules

**Detailed workplan phase 2**
- Final Policy guidelines, procedures and rules; basic overall standard

**Phase 1**
- WP 1A Prepar.
- WP 1B Project coordination
- WP 2A Policy guidelines, procedures and rules
- WP 3 Overall structure, basic standard
- WP 2B Monitoring/exec. of guidelines and procedures

**Phase 2**
- Start 2011
- 2010 to 2014
- WP 4A Convers. EN's (1st batch)
- WP 4B Conversion EN's (2nd batch)
- Other standards revised; first batch
- Other standards revised; last batch

Timeline:
- **2011**
- **2012**
- **2013**
- **2014**
Basic principles and basic standard

- Start with the highest priority with:
  - Detailed guidelines and procedures for revision of the standards:
    - e.g. project management, strategic goals, structure of the standards, basic principles and common formats
    - Including rationalisation of options
  - A basic standard on the integrated energy performance of buildings will provide systematic, clear and comprehensive overall continuous but modular structure, re-using the main elements of EN 15603 (Overall energy use and definition of energy rating) and core elements of other key standards, including common definitions, terms and symbols
Organisation

• Central coordination by (small) core team (Chair Advising Panel) of experts in CEN/TC 371 (EPBD coordination)
• Close cooperation with a Liaison Committee from the Member States including experts from the EPBD Concerted Action Initiative
  – Regular expert meetings in connection and organised by CEN/TC 371
• Start with setting up basic principles and rules (see next slide)
  – Learn from e.g. Eurocodes
  – Including a pilot of the conversion of current standards
Central coordination by small team of experts in CEN TC 371

- CEN TC 371 will organise this central coordination team in cooperation with the other relevant CEN TC’s.
- (small) Core Project Teams on different clusters, related to the various CEN TC’s:
  - TC 89, Thermal performance of buildings and building components
  - TC 228, Heating systems in buildings
  - TC 156, Ventilation for buildings
  - TC 247, Controls for mechanical building services
  - TC 169, Light and lighting
Close cooperation with a Steering Committee from the Member States

- With expert representatives from the EDMC
- With expert representatives from CA-3
- Regular expert meetings in connection and organised by CENTC371

Sept. 23.2010
**schematic operational structure**

Small central Project Coordination Team (e.g. organized as TC 371 Chairman Advisory Panel)

- Liaison Committee Member States on redevelopment of CEN-EPBD standards

ISO TC 163/WG 4 (JWG) Energy performance of buildings using holistic approach

ISO TC 163

ISO TC 205

Consultation: setting and monitoring requirements from MS

Central coordination, including monitoring of the basic principles and rules. Preparation of overarching standard

Core Project Teams per TC to prepare the specific standards or revisions, under continuous central coordination

CEN TC371

CEN TC 89

CEN TC156

CEN TC etc.

This activity is in TC371

Core Project Team

Core Project Team

Core Project Team

Core Project Team

European Commission

Mandate

EDMC and EPBD Concerted Action-3

CEN

Cooperation

Members
Coordination with ISO

• As work is carried out under the Vienna Agreement; CENTC371 is in close contact with ISO counterpart: ISO-TC163 WG4, the JWG of ISOTC 163 and 205: “Energy performance of buildings using holistic approach”

• The leadership and secretariat of both groups is overlapping:
  – Combined chair positions
  – CEN TC371 expert team have strategic positions in the ISO groups
  – Secretariat of both groups is held by NEN (NL)
CEN rules

• CEN-TC’s have an independent position regarding the standards they prepare and publish for voting.
• With accepting a 2nd mandate on the CEN EPBD standards CEN accepts the coordinating role of the CEN TC371
• Decisions on EPBD standards can only be taken with mutual consent of TC371 and related other TC’s: 89, 156, 228, 169, 247
Principles of Cooperation

• CEN TC's agree that the products from the coordinating committee (TC 371) and the horizontal CEN committees will be approved at both levels:
  – TC 371: checking compliance with the basic principles, common format and overall consistency,
  – the horizontal TC: responsible for the quality and adequacy of the technical content.

• A short document (1 or 2 pages) will explain this agreement.
Specific Guidelines

• In a more detailed document these principles are translated into concrete rules on procedures for e.g.
  – participation in the development, the involvement of MS experts (CA) and EC experts without them being nominated by NSB’s
  – circulation of documents,
  – consultation of interested parties,
  – parallel enquiry in TC 371 and horizontal TC,
  – parallel approval in TC 371 and in horizontal TC, ..
Overall guidance

• In guidance documents specific procedures will be laid down on the cooperation with the EU Member States (the Steering Committee; within the boundaries of the CEN rules):
  – meet the needs of the EU Member States regulators, the prime users of this set of EPBD standards

• The technical experts meet the regulation experts: standards shall be close to codes (more legislation oriented)
About cooperation CEN – ISO, we already did it, it is not new!

- CEN operates at European level
- ISO operates at the global level
- In many cases EPBD standards have been developed in cooperation ➔ EN-ISO standards (11 of the 43)
- Already several EN’s are EN-ISO
  - Example:

<table>
<thead>
<tr>
<th>EUROPEAN STANDARD</th>
<th>NORME EUROPÉENNE</th>
<th>EUROPÄISCHE NORM</th>
</tr>
</thead>
<tbody>
<tr>
<td>EN ISO 13790</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Expected intensified cooperation CEN-ISO
  - CEN standards used as basis
  - Taking the recommendations for improvements into account
  - With European experts retaining the initiative
Cooperation with ISO

• The foreseen cooperation with ISO implies that probably most of the work will be done under formal ISO lead, following the Vienna Agreement. For certain standards CEN will have the formal lead.

• Concerning the cooperation in preparation of the standards: CEN experts will be directly involved in the ISO groups preparing the standards and play a prominent role by producing the draft text.

• Concerning the consultation and approval procedures: The ISO drafts will be distributed in CEN for parallel enquiry and parallel approval by the responsible CEN–TC’s for which the proposed Specific Operational Guidelines will apply.
Structure CEN work plan

• Preparing and applying a common format for each standard, including a systematic and hierarchic and procedural description of options, input/output variables and relations with other standards, and including:
  – A clear separation of the (harmonised) procedures and the choices and data to be provided at national or regional level;
  – A common structure of easily accessible and comparable national annexes to each standard, containing the national or regional choices, boundary conditions and input data.
  – An informative technical report, accompanying each standard, This will strongly reduce the volume of the standards and strengthen their focus, thus facilitating the adoption (including translation) in national/regional regulations.

(National annex: a standardized format in which national choices are presented)
Tentative main structure

To be refined in consultation with the Member States

Common terms, definitions and symbols

Climatica data

Product data

Common calculation structure definition

Aim and scope of calculation
Building boundaries and partitioning
Operating Assumptions

Building calculation
Interaction with systems

Energy needs

Technical systems calculation

Delivered and exported energy; contrib. ren.energy

Data aggregation and energy weighting

Primary energy, CO2 emission, costs

Certification scheme
Reporting scheme

Heating
DHW
Ventilation
Cooling
Lighting

Inspection procedure and reporting

Measured energy use

Correlation methods

Economic calculation

*): add: Transport for people (lifts, escalators)? Appliances?
Formalization of collaboration between CEN and CA3

• Establish the EPBD Steering Committee in cooperation with the EDMC

• Ensure participation of MS-experts on CEN level:
  – through official nomination by the national MB’s of CEN
  – through official acceptance as invited experts in CEN committees
Conclusion

• Two phase approach:
  – First phase to define the basic requirements (principles) and a modular overall structure for the 2\textsuperscript{nd} generation of CEN standards to support the EPBD
  – Second phase to revise the set of standards

• This is a highly dynamic process
  – Continuous feed back and mechanisms for adjustments needed
  – Transparent, practical procedures for exchange of views and principles, cooperation and feed back of all interested parties
  – Continuous central coordination and monitoring of the progress in terms of consistency, efficiency and efficacy
Thank you for your attention