

# Energy Performance of Buildings Directive (EPBD) and the CEN Standardisation Work

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# The Technical Annex to the Energy Performance of Buildings Directive

- In addition to thermal characteristics, air-tightness, the efficiency of heating installations, hot water supply, air-conditioning, ventilation and built-in lighting, the following must also be included in the energy performance of buildings:
  - position and orientation of the building, passive solar systems and solar protection, natural ventilation, indoor climate, and
  - the positive influence of active solar systems and other heating and electricity systems based on renewable energy sources, CHP, district heating & cooling and natural lighting.

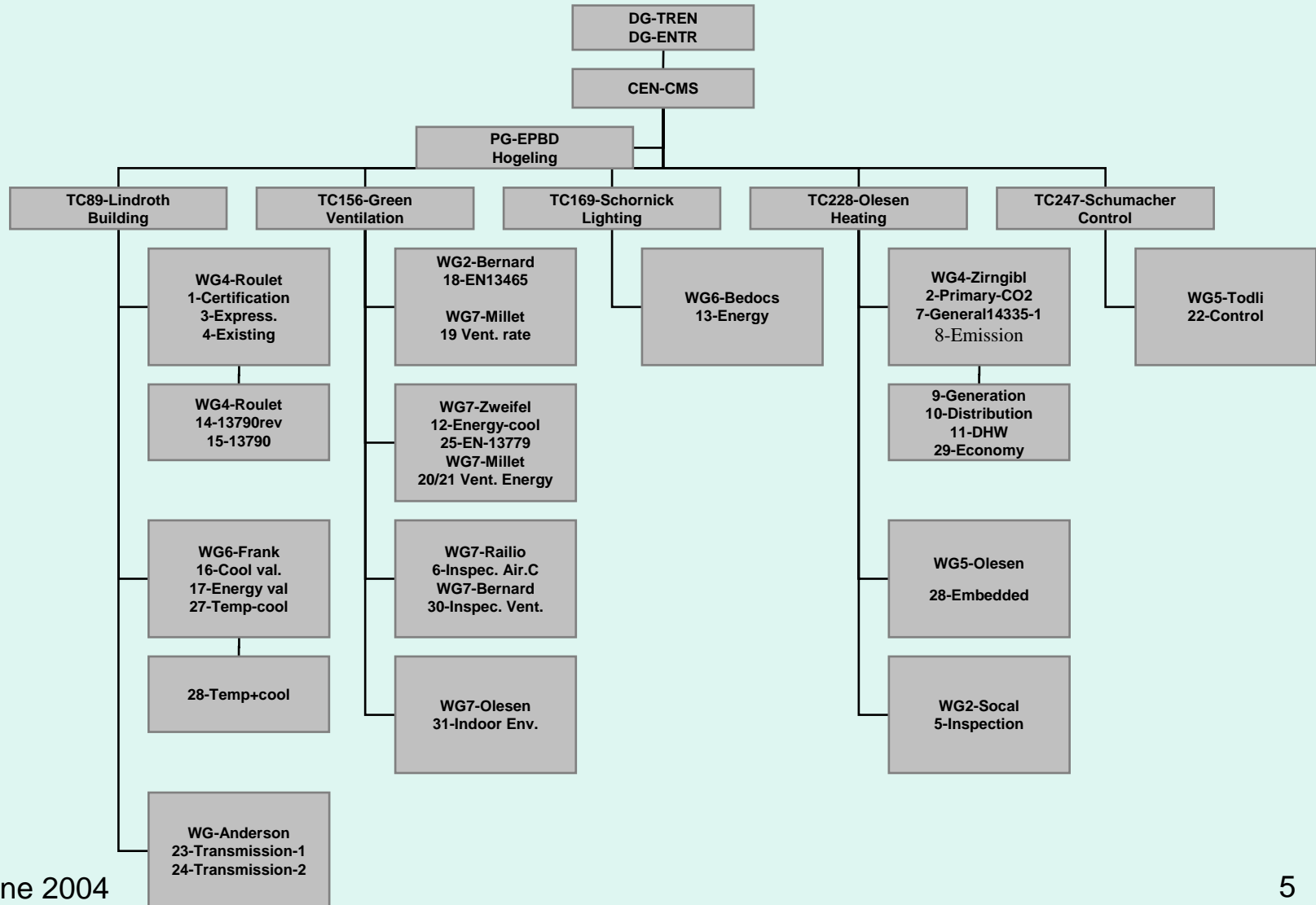
# TASK AND RESPONSIBILITIES of CEN project group on EPBD

- Facilitating discussion on programme of work relevant to the EPBD.
- Creating an umbrella document, (a kind of road map) to present a clear overview of all work items, standards, their relation and the coverage of the standards needed for the EPBD.
- A platform for the responsible chairs of CEN TC 89, TC156, TC169, TC228, TC247 to watch target dates of work relevant to EPBD which implies:
  - facilitating the WG-convenors and task leaders with information from other TC's;
  - identifying links, overlap with the current standards and work on standards and the ongoing work for the EPBD.

# Progress of work of TC89/156/169/228/247

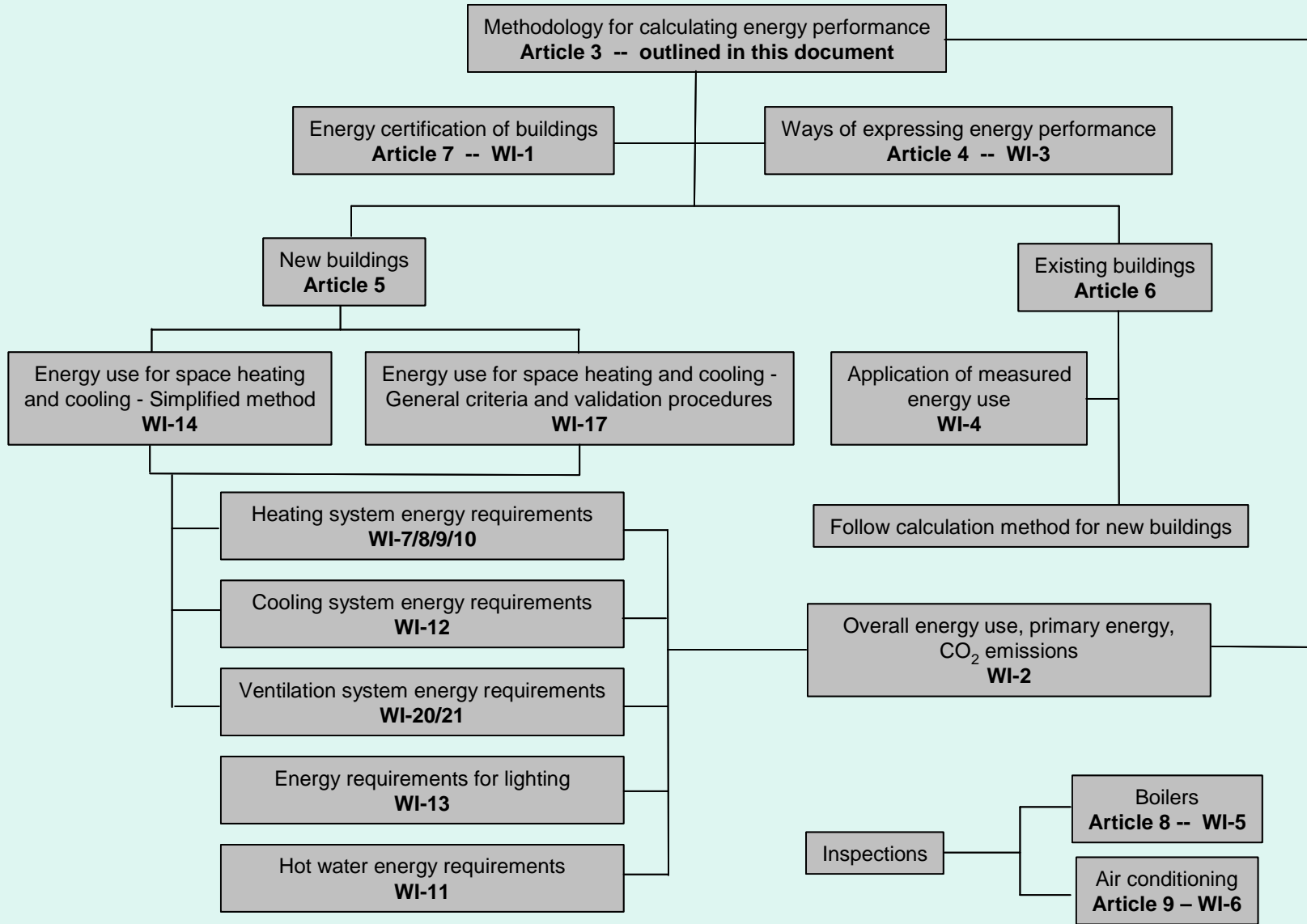
- An UMBRELLA document has been produced showing the relationship between different TC:s and different work items.
- The program of work is further developed:
  - all task group leaders are known, tasks have been distributed;
  - all 31 work items will deliver at least the outline and content of the standard by the end of June; many are already completed.

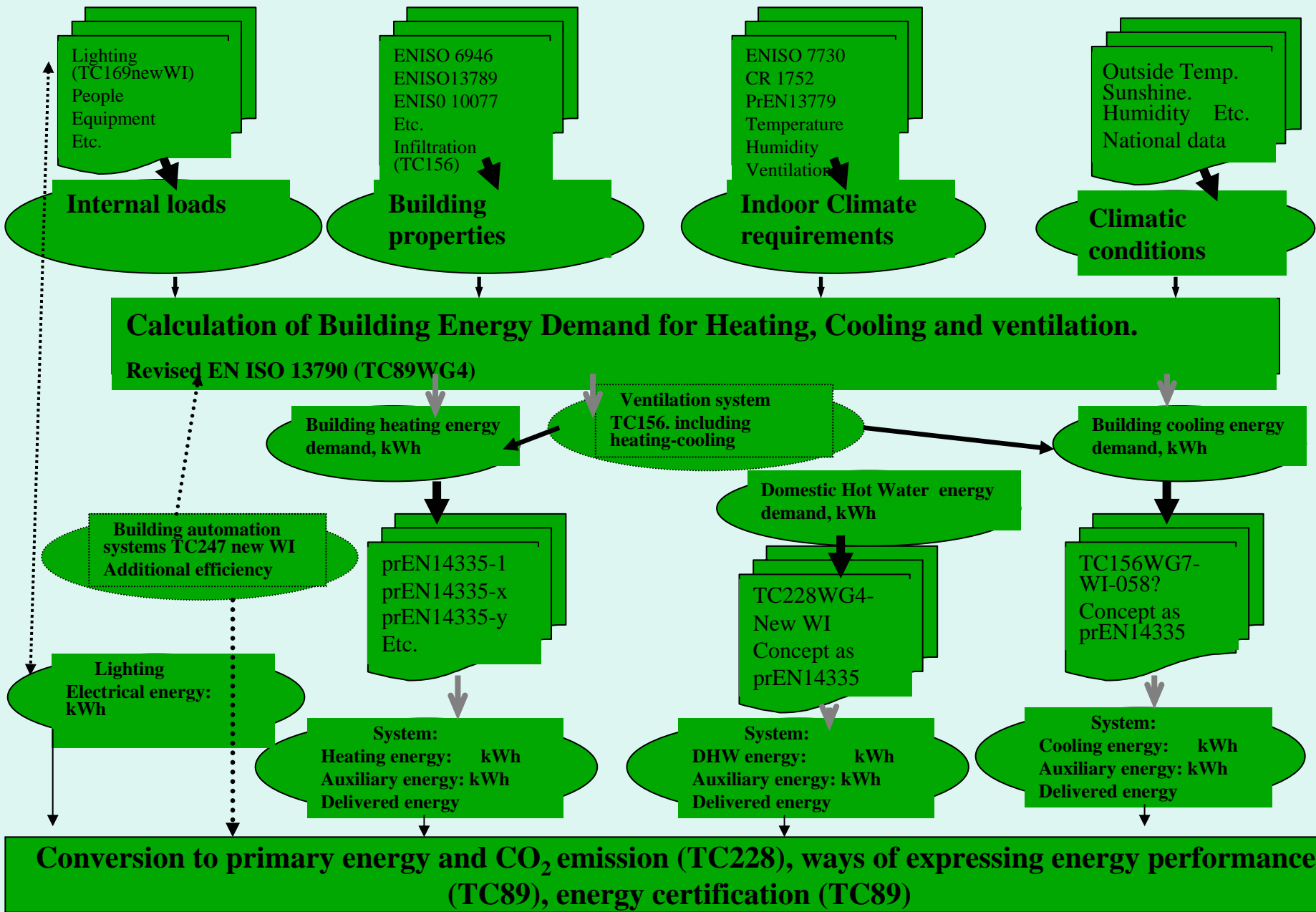
# Organisation-by-TC

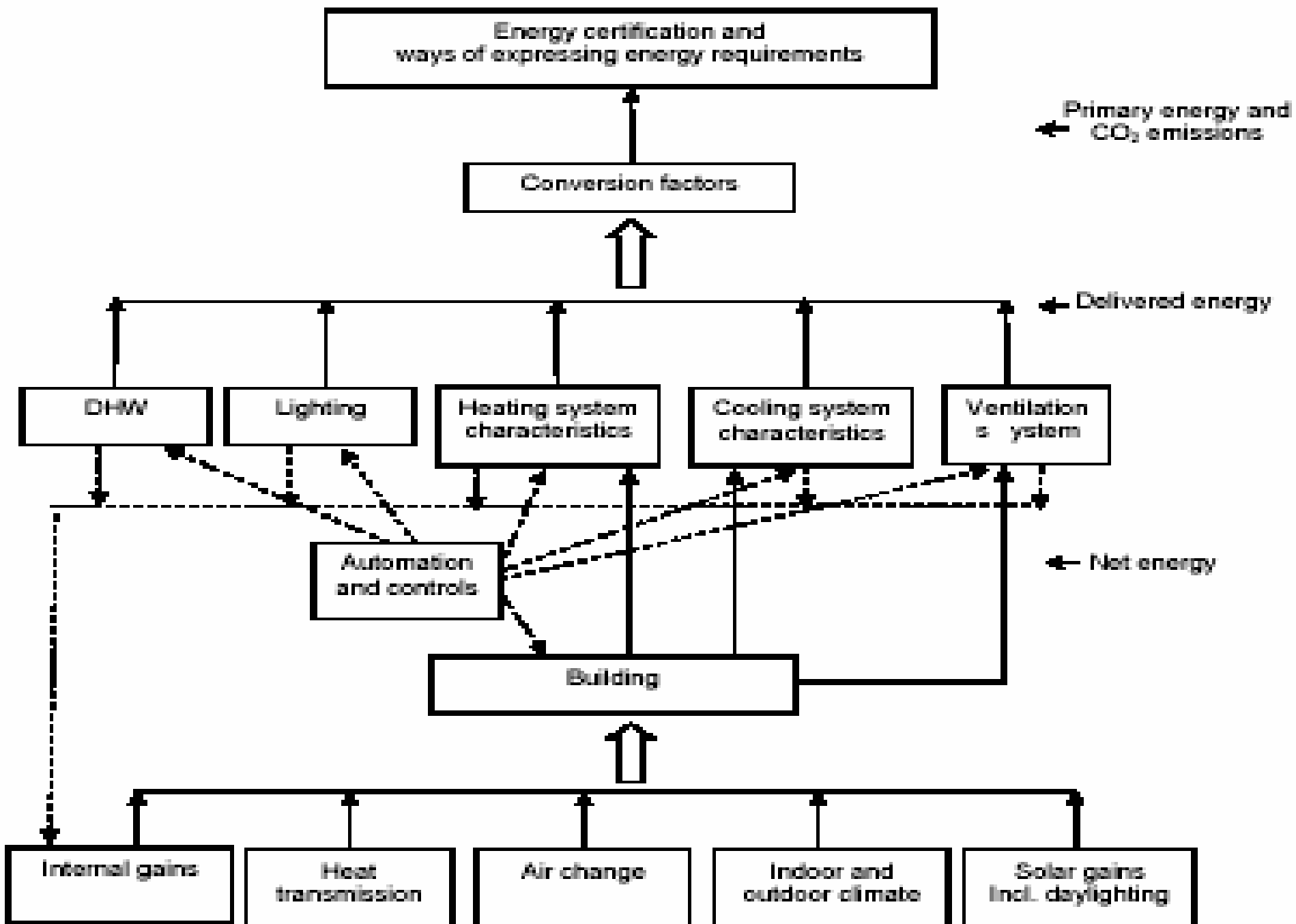


**Figure 1**

**Energy Performance of Buildings**







send information to



			1	2	3	4
			Energy certification of buildings	Overall energy use, primary energy and CO <sub>2</sub> emissions	Ways of expressing energy performance of buildings	Application of calculation of energy use to existing buildings using
8904	1	Energy certification of buildings				
8904	2	Overall energy use, primary energy and CO <sub>2</sub> emissions				
8904	3	Ways of expressing energy performance of buildings				
22804	4	Application of calculation of energy use to existing buildings using metered energy				
22800	5	inspection of boilers and heating systems				
15607	6	inspection of air-conditioning systems				
22804	8	Heating systems – Part 2.1: Space heating emission systems				
22804	9	Heating systems Part 2.2: generation				
22804	10	Heating systems 2.3 distribution				
22804	11	heating systems DHW				

# Will CEN deliver on time?

- **Yes**, if we believe that this is an unique chance for the building- and building-services sector to give harmonised standards a chance.
- **Yes**, if we believe that the application of standard solutions and standard product requirements will benefit our industry, the user and consumer and will lead to more energy efficiency.
- **Yes**, if we believe that it is cheaper in the longer term to maintain EN standards than to have 25 national systems.
- **Yes**, if we don't want later to change our national systems, if EU directives require other methods in the absence of acceptable CEN standards.
- **Yes**, if the Commission shows strong commitment/ financial support.
  
- **No**, if we follow all CEN procedures and traditions, instead of using some shortcuts.
- **No**, if we first want to study and compare all possibilities.

# Time schedule

- MS have to prepare legislation and need at least one year to prepare this
- It must become clear by summer 2004 **which possible EN standards** are achievable, this has to be guaranteed by CEN and facilitated by EU
- **Possible EN standards** means: CEN prEN drafts to be available by the end of 2004, to be formalised in the next years (latest before end 2007)

# How to speed up the CEN work?

- Avoid the “best solution”, this is the greatest enemy for standardisation work.  
(Standards are always subject to improvement.)
- Use the results from EU-projects like ENPER-TEBUC, labelling, MER:s etc.
- Don't think in terms of whether some current national standards are better than others; agree on a minimal acceptable level for Europe now!  
Cooling is a good example.

# How to speed up the CEN work?

- For all WI's from the TC's involved the work follows a swift scenario, meaning
- a more simplified working procedure, including
  - Small task groups of experts producing draft standards within a few months.
  - WG publish these draft without hesitation, allow the WG to agree on this (is within CEN rules) and achieve commitment on TC level at the same time.
  - CEN-CMC is committed to give top priority for publishing these drafts.

# Example of documents showing the contact persons and experts by WI

12	Dynamic calculation of room temperatures and of load and energy for buildings with room conditioning systems (including solar shading, passive cooling, and position and orientation)	31	TC 156 WG7	Contact: Gerhard Zweifel Experts: Maassen, Millet, Hitchin, v.Wolferen, Orshoven;.....
13	Energy performance of buildings – Energy requirements for lighting (including daylighting)	11	TC 169 WG9	Contact: Bedocs Experts: Husanndee; Gasser.....
14	Thermal performance of buildings – Calculation of energy use for space heating and cooling – Simplified method	11 started	TC 89 WG4	Contact: C.A. Roulet Experts: v. Dijk, Visier, Millet.....

# Cooling

- While air-conditioning is being increasingly addressed in the EPBD standardisation work, the process of incorporating passive cooling technologies needs to be enhanced, expanded and accelerated.
- Additional input into this process is necessary forthwith.

# Passive cooling, daylighting, etc.

- It is important that the standardized calculation methodologies developed address i.a., the following two equally important issues:
  - that the methodologies allow for integrated calculations of the energy performance of systems and of the building as a whole;
  - that the methodologies can also be used as planning and design instruments by architects and builders.

# Time schedule

- STEP 1 :End of March outline (scope and content) available
- STEP 2: End of June first draft of WG ready for circulation. This draft shall be as complete as possible. A clear picture of what the standard will take in account and the possible input and output connections with the other standards. An agreement in principle at TC level is the goal in this phase. Comments from TC level and the national mirror groups are foreseen.
- These steps will be very informative for the MS as they will provide a clear picture of the standards that will become available.

# Time schedule

- STEP 3: 15 of October draft standards for agreement on CENTC level available: all comments to be available within 3 weeks. After this some fine tuning has to take place.
- STEP 4: End of December all 31 standards sent to CEN-CMC to be prepared for publishing for official enquiry.
- STEP 5: Publishing the prEN's. According to CEN rules translations have to be provided within 8 weeks. The prEN's have to be published before 15 March 2005.

# Unique open procedure

- In steps 1-4 it is foreseen that all documents will be distributed along at least 2 lines:
- To the Commission and via CIRCA available for the Commission`s Energy Demand Management Committee
- All 5 CENTC secretariats to forward drafts to the national mirror groups for their TC:s. (Normally this only happens at step 3 and only within one TC.)
- Additional dissemination is being considered: public websites, to be facilitated by “Concerted Action” and EPBD Platform.