

International Conference on the
Energy Performance of Buildings
Brussels – 21-23 September 2005

A conference consisting of 2 parallel sessions focusing on various issues regarding the energy performance of buildings

Parallel session "EPBD"

**Energy Performance of Buildings Directive:
Implementation in practice**

Session supported by the European Commission and its
Intelligent Energy Executive Agency (IEEA)



Parallel session "R&D on ventilation"

**Ventilation in relation to
the Energy Performances of Buildings**

With the subtheme 'Whole building heat, air and moisture transfer'

26th AIVC Conference



International conference organised by



International Network for Information on Ventilation and Energy Performances

Parallel session "EPBD"

The 'Energy Performance of Buildings Directive: Implementation in practice' session can be considered as the 'practice oriented' part of the conference: presentations and discussions focused on information for practitioners whereby all building related aspects are considered: building envelope, HVAC, renewable energies... All presentations are by invitation. The programme presentations have close links with the work carried out in the framework of the EPBD concerted action and the various EPBD related EU SAVE projects.

Session EPBD 1 – EP standards and calculation procedures

Article 3 of the EPBD requires that EU Member States shall apply a methodology of calculation of the energy performance of buildings on the basis of the general framework set out in the Annex of the Directive. The session should give the participants a clear overview of the status regarding calculation methods.

Session EPBD 2 – Inspection and commissioning of technical installations

According to **articles 8 and 9** of the EPBD, inspection of boilers and air conditioning systems is mandatory. This represents a major challenge, in terms of procedures, number of inspectors, quality of inspectors and quality assurance. The session should give a clear overview of the major issues of concerns and give practical information how the Member States intend to implement these articles. Although ventilation systems which only serve for the control of the IAQ are not bound by **article 9**, it is important to also pay attention to these systems.

Session EPBD 3 – Existing buildings: calculation procedures - certification – labelling

Article 7 of the EPBD requires an energy performance certification of all buildings, including existing buildings when sold or rent. Moreover, recommendations for improvements have to be provided. This is a major challenge, in technical terms (availability of appropriate procedures) as well as in terms of required resources (inspectors, financial means, etc.). The session should give a clear overview of the challenges, existing approaches, and activities in the various ongoing projects, practical feedback of market experiences, etc.

Session EPBD 4 – Indoor climate considerations and the EPBD

Indoor climate is mentioned several times in the EPBD (e.g. **article 4** and the **annex**). Achieving good indoor climate conditions is not obvious in new and existing buildings. Poor indoor air quality and overheating problems in summer are major issues of concerns. It is essential that energy performance regulations don't contribute to an increase in these problems and preferably lead to a lower occurrence of such problems. The session should give a clear overview of how these problems are handled into the different national regulations.

Session EPBD 5 – Very low energy buildings and the EPBD

During the last decade, an increased number of very low energy buildings have been built. A major development in Europe is the so-called 'Passive House' concept, whereby the availability of heating systems is no longer a requirement. The session will focus on some major highlights of the Passive House concepts and of the 'Ecobuilding' projects of the 6th framework programme. Specific attention should be given to the application of the EPBD to such kind of buildings.

Session EPBD 6 – Airtightness and energy for transport

The **annex** of the EPBD mentions that the methodology for calculation may also include airtightness; moreover it specifically refers to the aspects of ventilation and 'natural ventilation'. On the other hand, energy for transport has been receiving increased attention over the last few years. In practice, there are major developments in fan technology and system design, also new ventilation concepts are emerging, e.g. hybrid ventilation and demand controlled ventilation, whereby there is often a drastic reduction of the energy use for the transport of air. The session will focus on these various issues.

Session EPBD 7 – Innovative systems and the EPBD

It is logical that buildings which make use of better technologies receive a better assessment in the energy performance certificate. But, some technologies, and in particular innovative systems, may not be covered by agreed calculation procedures. It must be avoided that the non-availability of procedures for such innovative systems becomes a major barrier for the market introduction. The session should give a good understanding of the existing problems. Moreover, there should be a clear information about the way the issue is handled in some countries. Moreover, indications about possible attractive approaches should be given.

Session EPBD 8 – Dissemination, training and non-technical issues in the EPBD context

Implementing the EPBD requires raising awareness and training of hundred thousands of people in Europe. Several countries already have practical experience and specific projects are running for facilitating the introduction of the EPBD. Moreover, there are also more formal training issues, in particular regarding the certification of buildings and installations (**articles 8 and 9**). The focus will be on the formal aspects of training. Various activities in the field of awareness raising and dissemination will also be discussed.

Parallel session “R&D on ventilation” – 26th AIVC Conference

Since 1980, the AIVC conferences have been the meeting point for presenting and discussing interesting developments and results regarding ventilation in buildings. At each conference, a specific theme is selected. This year, the conference theme is ‘**Ventilation in relation to the energy performance of buildings**’. There are several reasons for selecting this theme:

- In many countries, buildings represent 30...50% of the total energy and pollution load. As buildings are better insulated, the part played in the ventilation of the overall energy consumption of the buildings might become more and more important if no attention is paid to it.
- In the EU, the deadline for the implementation of the Energy Performance of Buildings Directive (EPBD) is approaching very fast, and there are still many issues to be solved for its correct implementation. This Directive imposes that all 25 EU Member States to have in January 2006 an Energy Performance Regulation in place with e.g. energy performance requirements for ALL new buildings as well as energy performance certification for all buildings when constructed, rent or sold. This conference is an excellent occasion for having a clear picture regarding the status of implementation just a few months before January 2006.
- During the last decade, a lot of attention has been given to the development of innovative ventilation systems. Energy Performance regulations can be a stimulus for the market introduction of innovative systems but also a barrier.

Topics of the session

The ‘**Current R&D**’ session is focused on presentations and discussions regarding ventilation related topics for the R&D community, specialised consultants...

The following topics will be discussed during this session:

- Treatment of ventilation aspects in standards and regulations
- Handling of ventilation in energy performance regulations outside Europe
- Air tightness of buildings and ducts
- Energy for transport of air
- Innovative ventilation systems and energy performance regulations
- Impact of regulations on ventilation market
- Good indoor climate and energy performance
- Ventilation in the context of energy certification of buildings
- Commissioning and inspection of ventilation systems
- Ventilation related challenges for the existing building stock
- Ventilation in very low energy buildings
- Ventilation aspects in warm and cold climates
- Economics of indoor climate

In total, some 50 presentations are scheduled.

Subtheme R&D “Whole building heat, air and moisture transfer”

As during previous conferences, a subtheme has been selected: ‘**Whole building heat, air and moisture transfer**’. This is also the title of IEA ECBCS Annex 41. For this subtheme, specific attention will be given to the following two topics:

- Coupling, in terms of heat, air and moisture flows, between building and building fabric, consequences for energy consumption and durability
- Combined effect of ventilation and hygric inertia on indoor climate and energy consumption.

Practical information

Conference organizers

The conference is organized by INIVE EEIG (the International Network for Information on Ventilation and Energy - www.inive.org) on behalf of the AIVC (Air Infiltration and Ventilation Centre – www.aivc.org) with the support of the EC EPBD Concerted action (www.epbd-ca.org).

Provisional programme

	Tuesday 20/09	Wednesday 21/09/2005	Thursday 22/09/2005	Friday 23/09/2005
9:00		Opening session	R&D 4 EPBD 4	R&D 7 EPBD 7
10:45		Break	Break	Break
11:15		R&D 1 EPBD 1	R&D 5 EPBD 5	R&D 8 EPBD 8
13:00		Lunch	Visits EC seminar on invitation	Lunch
14:00		R&D 2 EPBD 2		Closing session
15:45		Break		
16:15		R&D 3 EPBD 3		
18:00		Break	R&D 6a EPBD 6a	
19:00	Welcome reception Desk opening	Conference dinner	Walking buffet	
20:00			R&D 6b EPBD 6b	
21:00				

Venue

The AIVC conference 2005 will be held at the **Hotel President WTC**
Boulevard du Roi Albert II, 44 - Koning Albert II-laan, 44
BE-1000 Brussels, Belgium
Tel: +32.2.203.20.20
www.presidenthotels.be



Registration fees

	Before 1 st July 2005	From July 1 st 2005
Conference fee	726 € (600 € excl. VAT)	847 € (700 € excl. VAT)
Conference fee for students	423.5 € (350 € excl. VAT)	484 € (400 € excl. VAT)

All prices are without accommodations.

The fee covers: attendance at all conference sessions, conference material, welcome reception, lunches (except on Thursday noon) and breaks throughout the conference, conference proceedings. The fee does not include accommodations and conference dinner.

Additional information

Additional information will be made available on the AIVC website (e.g. titles of presentations, content of opening and closing sessions, workshop details...): www.aivc.org > Conferences > AIVC Conference 2005.