



International Workshop

Ventilative Cooling : Need, Challenges and Solution Examples

**Brussels, Belgium
19-20 March 2013**

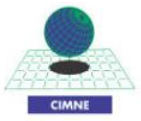


Peter Wouters and Rémi Carrié

INIVE EEIG

INIVE

International Network for Information on Ventilation and Energy Performance





BUILD UP

energy solutions
for better buildings

March 2013

AIVC/venticool/TightVent Workshops, Brussels

Welcome

Dear Workshop Participant,

This BUILD UP 4U issue is dedicated to the workshops organised by AIVC, TightVent and venticool on:

- the quality of ventilation systems in residential buildings, and
- ventilative cooling, in collaboration with the new IEA Annex 62.

Find out how, in the context of AIVC, TightVent and venticool, we make use of the information and services provided by BUILD UP, the official EU portal on energy efficiency, for a wider information spread.

I wish you a pleasant and informative reading,

Peter Wouters

Manager INIVE EEIG



Günther Oettinger,
*EU Commissioner
for Energy*

“(...) If we want to transform our society into an energy efficient and decarbonised one, energy-intelligent buildings will play a vital role. Let us work together towards cleaner and more energy intelligent buildings for the future. (...)”



BUILDING AND DUCTWORK AIRTIGHTNESS PLATFORM



the international platform for ventilative cooling



The IEA Information Centre on Energy Efficient Ventilation

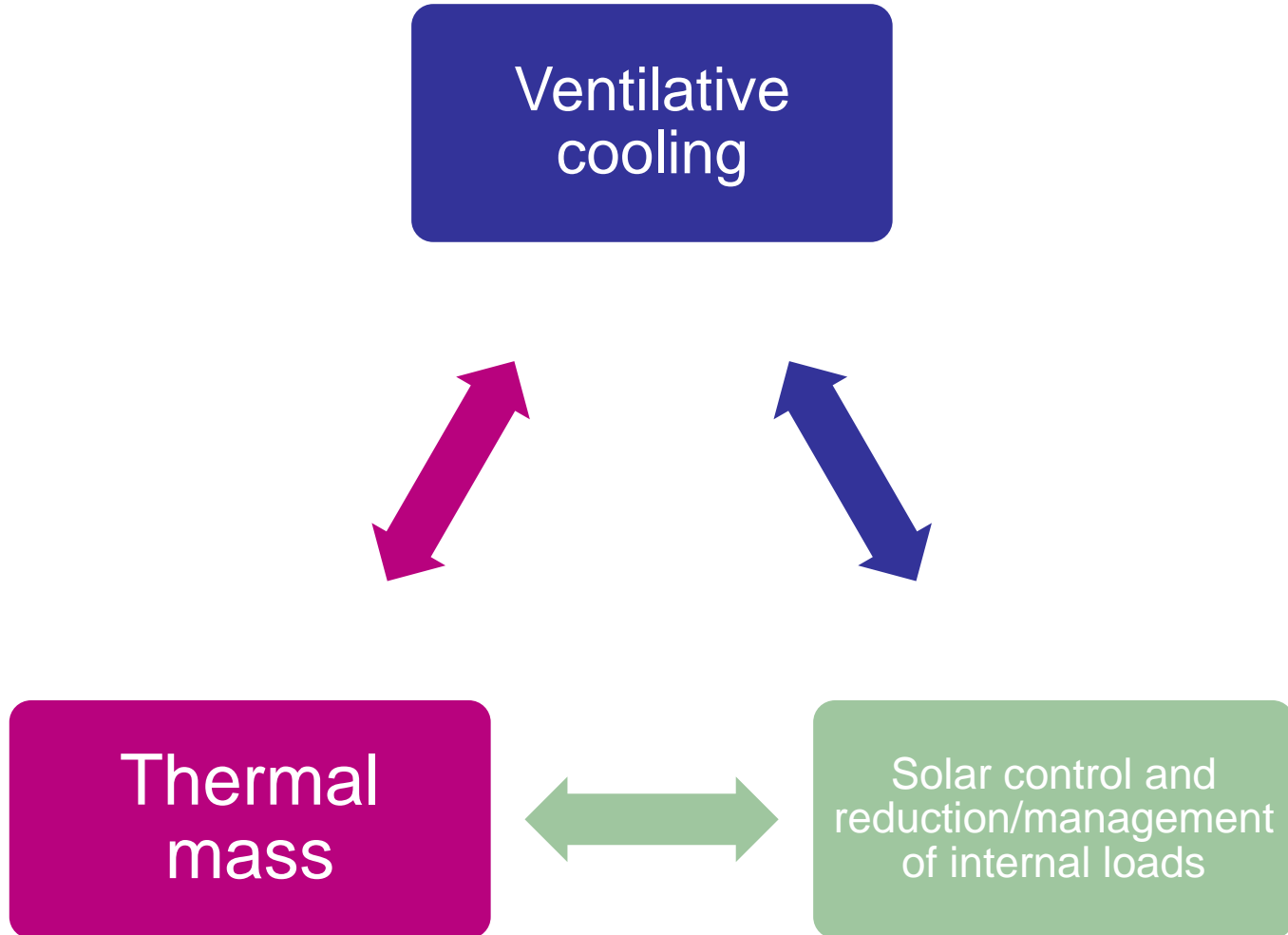
2011
2012
2013



15 countries
15 countries
15 countries



In the context of an energy efficient thermal comfort strategy...



venticool

the european platform for ventilative cooling

Newsletter

No1 • OCTOBER 2012

Welcome to venticool

It is with pleasure that we present to you this first newsletter of the European Ventilative Cooling Platform, **venticool**.

Are we aware about the energy saving potential of ventilative cooling? Is it sufficiently well-covered in (future NZEB) regulations to promote its adequate use? We believe that this strategy, if well designed and executed, can play a major role in the context of a drastic energy use reduction in buildings as required by the recast of the Energy Performance of Buildings Directive.

Through this newsletter, you will be regularly informed on the latest developments on ventilative cooling, including policy issues, events, innovative concepts, standardization, case studies, etc. Please, feel free to visit our website at www.venticool.eu

Peter Wouters, Manager of INIVE EEIG

Official Launch of the Ventilative Cooling Platform at the Copenhagen conference

Can we reconcile the ambitious goals of the recast of the Energy Performance of Buildings Directive – in particular, 2020 objective to realise nearly zero-energy buildings – with good thermal comfort and indoor air quality? There are reasons to be optimistic given the efforts undertaken by governments, industry and building professionals in the past few years. But at the same time, it remains extremely challenging to effectively have all new buildings in 2020 meeting the nearly zero-energy target.

The learning process is clearly underway and it is stimulated by the communication and feedback from a number of real projects. Some of these projects demonstrate the potential of natural or mechanical ventilative

cooling which, as part of an overall design strategy including adequate solar protections, intelligent use of thermal mass and sometimes support of active cooling, can help improve thermal comfort. Therefore, this strategy is more and more considered to reduce the cooling energy demand in summer and/or mid-season conditions, depending in particular on outdoor climate, building design and internal loads.

However, there are several concerns:

- Not all buildings function in line with the assumed performances and sometimes the real indoor climate is far away from the predicted performances;
- The national energy performance regulations not always reward the

What is ventilative cooling?

Ventilative cooling refers to the use of natural or mechanical ventilation strategies to cool indoor spaces. This effective use of outside air reduces the energy consumption of cooling systems while maintaining thermal comfort. The most common technique is the use of increased ventilation airflow rates and night ventilation, but other technologies may be considered as well. Ventilative cooling is relevant in a wide range of buildings and may even be critical to realize renovated or new NZEB.

Key objective

*Present
situation – Poor
understanding
of ventilative
cooling
potentials*



*Good
understanding
and appropriate
use of
ventilative
cooling*

Prof. Per Heiselberg

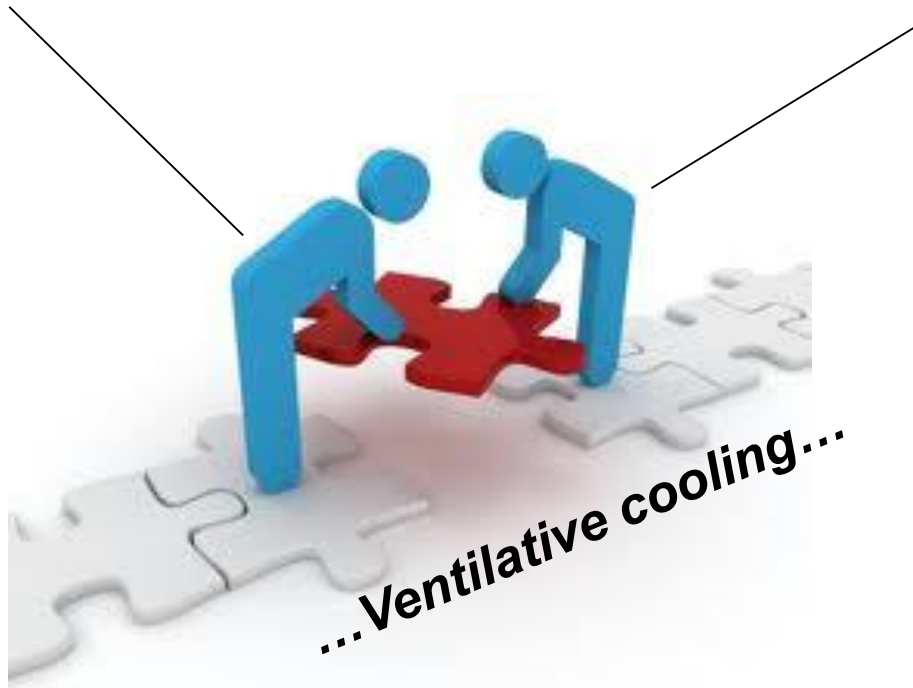
***More focusing on knowledge
generation aspects***

***More focusing on
market implementation***

IEA Annex 62

(in preparation phase)

venticool



...Ventilative cooling...

venticool

the international platform for ventilative cooling

The Ventilative Cooling Platform is at present
supported by:



Events

- 2013 AIVC conference, Athens, Greece, 25-26 September 2013
 - ▶ www.aivc2013conference.org

A promotional banner for the 34th AIVC Conference. The background is a blue gradient with a stylized architectural rendering of a modern building on the right. The text is arranged in a clean, professional layout. The main title '34th AIVC Conference' is prominently displayed in the center. Below it, three sub-conferences are listed: '3rd TightVent Conference', '2nd Cool Roofs' Conference', and '1st venticool Conference'. The dates and location are specified on the right side of the banner.

Energy conservation technologies for mitigation
and adaptation in the built environment:
The role of ventilation strategies and smart materials

34th AIVC Conference

3rd TightVent Conference

2nd Cool Roofs' Conference

1st venticool Conference

25-26
September 2013

Divani Caravel Hotel
Athens, Greece

Key objective of this workshop

How and when strategies for increased ventilation with outdoor air can reduce the cooling load while maintaining good indoor environmental quality?

Built examples to document the need and potential of ventilative cooling as well as the status of present approaches

Design challenges related to prediction and evaluation of the cooling need

Perceived barriers and challenges in standards and existing building regulations

New ideas

60 participants to discuss these issues based on contributions from various countries and international organizations

On behalf of AIVC and venticool, we wish you a pleasant and informative workshop