



## Brussels, Belgium 23 October 2017

# Ventilative cooling in buildings: now & in the future International Workshop

### Workshop description

The current development in building energy efficiency towards nZEB buildings represents a number of new challenges to design and construction. One of these major challenges is the **increased need for cooling** in these highly insulated and airtight buildings, which is not only present in the summer period but also in the shoulder seasons and in offices even in midwinter. Ventilative cooling can be an energy efficient solution to address this cooling challenge in buildings.

The **objective** of this workshop is to discuss the implementation of ventilative cooling and its role to guarantee good thermal summer comfort in commercial, educational and residential buildings.

Topics addressed:

- Design guidelines
- Solutions and technologies
- Demonstration in current buildings
- Energy performance calculation
- Recommendation for standards
- Future challenges and opportunities

This workshop presents the outcomes of **IEA EBC Annex 62**, discusses with experts from industry and interacts with the audience through interactive voting and group discussion.

### About IEA EBC Annex 62 Ventilative Cooling

Annex 62 Ventilative Cooling of the IEA Energy in Buildings and Communities (EBC) programme aims to make ventilative cooling an attractive and energy efficient cooling solution to avoid overheating of both new and renovated buildings.

**Objectives** are:

- To develop and evaluate suitable **methods and tools** for prediction of cooling need, ventilative cooling performance and risk of overheating in buildings
- To develop **guidelines** for an energy efficient reduction of the risk of overheating by ventilative cooling solutions and for design and operation in both residential and commercial buildings
- To develop guidelines for **integration** of ventilative cooling in **energy performance calculation** methods and regulations including specification and verification of key performance indicators.
- To develop instructions for improvement of the ventilative cooling capacity of existing systems and for development of new **solutions** including their control strategies.
- To demonstrate the performance of solutions through analysis and evaluation of **well-documented case studies**.

**Participating countries** in this Annex are: Australia, Austria, Belgium, P.R. China, Denmark, Finland, Ireland, Italy, Japan, the Netherlands, Norway, Portugal, Switzerland, United Kingdom, and USA.

# Programme

Monday 23 October, 2017	
09:00-09:30	<b>Registration</b>
<b>Outcomes of IEA EBC Annex 62 Ventilative cooling</b>	
09:30-09:45	<b>Welcome</b> <i>Hilde Breesch (KU Leuven), Peter Wouters (INIVE)</i>
09:45-10:05	<b>Introduction to Annex 62: background, objectives and results - Interactive voting</b> <i>Per Heiselberg (Aalborg University)</i>
10:05-10:25	<b>Design Guidelines</b> <i>Annamaria Belleri (Eurac Research)</i>
10:25-10:45	<b>National energy performance calculation methods</b> <i>Michal Pomianowski (Aalborg University)</i>
10:45-11:05	<b>Solutions and technologies</b> <i>Theofanis Psomas (Aalborg University), Hans Martin Mathisen (NTNU)</i>
11:05-11:30	<b>Morning Break</b>
11:30-11:50	<b>Implementing technologies in a kindergarten and a lecture room</b> <i>Guilherme Carrilho da Graça (University of Lisbon), Maria Kolokotroni (Brunel University)</i>
11:50-12:10	<b>Lessons learned from actual buildings</b> <i>Paul O'Sullivan (Cork Institute of Technology)</i>
12:10-12:25	<b>Interactive voting</b> <i>Moderator: François Rémi Carrié (INIVE)</i>
12:25-13:05	<b>Panel discussion: Ventilative cooling in practice</b> <i>Moderator: Hilde Breesch (KU Leuven)</i> <i>Panellists: Peter Holzer (Annex 62), Ivan Pollet (Renson), Bruno Deraedt (BAST architects &amp; engineers), Wout Parys (BAUPHI), Erik Smeets (Flemish Government)</i>
13:05-14:05	<b>Lunch</b>
<b>Broader Scene and Future International Collaboration</b>	
14:05-14:25	<b>Future challenges and opportunities</b> <i>Peter Wouters (INIVE)</i>
14:25-14:45	<b>Recommendations and challenges for CEN and ISO standards</b> <i>Christoffer Plesner (VELUX A/S)</i>
14:45-14:55	<b>Interactive voting</b> <i>Moderator: François Rémi Carrié (INIVE)</i>
14:55-15:30	<b>Panel discussion: The role of ventilative cooling to guarantee good thermal summer comfort</b> <i>Moderator: Per Heiselberg (Aalborg University) Panellists: Flourentzos Flourentzou (Annex 62), Karsten Duer (VELUX A/S), Hendrik-Jan Steeman (Arcadis), Ann Van Eycken (ES-SO)</i>
15:30-16:00	<b>Afternoon break</b>
16:00-16:15	<b>Future international research: Smart overheating prevention and resilient cooling in changing urban climates</b> <i>Peter Holzer (Institute of Building Research &amp; Innovation)</i>
16:15-16:50	<b>Group discussion</b> <i>Moderator: Peter Holzer (Institute of Building Research &amp; Innovation)</i>
16:50-17:00	<b>Closing remarks</b> <i>Per Heiselberg (Aalborg University)</i>
17:00	<b>Reception</b>

## Organisers

The workshop is an initiative of **IEA EBC annex 62** (<http://venticool.eu/annex-62-home/>) & **venticool** ([www.venticool.eu](http://www.venticool.eu)) and is hosted by **INIVE** (International Network for Information on Ventilation and Energy Performance, [www.inive.org](http://www.inive.org)), **BBRI** (Belgian Building Research Institute - <http://www.bbri.be>) & **KU Leuven** (<http://iiv.kuleuven.be/onderzoek/sustainable-buildings/>).

## Language

English will be the official language. No translation is foreseen.

## Cost

Participation to the workshop is free, but requires you to register for the event. In case of no show, a fee of 100€ may be invoiced to cover organizational costs (material, catering, etc.)

## Registration

To register, please fill in the registration form and send to Mr. Stéphane Degauquier at INIVE EEIG (c/o BBRI): Avenue P. Holoffe 21, B 1342 Limelette, Belgium ☎ +32.2.655.77.11 📠 +32.2.653.07.29 @✉ [sd@bbri.be](mailto:sd@bbri.be)

## Venue

The workshop will take place in the Brussels Meeting Centre of the Belgian Building Research Institute (CSTC-WTCB) Boulevard Poincaré 79 (Poincarélaan 79), 1060 Brussels, Belgium. It is within walking distance of Brussels South train station, and not far away from the city centre (10-min walk).

