

Newsletter



Air Infiltration and Ventilation Centre

Foreword

Welcome to the March 2026 edition of the AIVC newsletter.

This issue highlights several upcoming events and recent activities of the AIVC. In particular, we invite you to join our upcoming webinar (on March 17) on airtightness in practice, which will present new insights into long-term performance, field evidence and innovative leak detection methods. We also encourage you to participate in the international workshop 'Climate Change, Ventilation and Resilience' taking place on 21–22 April 2026 in Madrid.

Looking further ahead, preparations are underway for the 46th AIVC Conference, which will be held in Incheon, Republic of Korea, on 30 September – 1 October 2026.

This newsletter also features the release of Technical Note 75 on energy recovery ventilation, the completion of two AIVC projects on IAQ metrics and gas-phase air cleaning, and more.

We hope you enjoy this edition and encourage you to stay connected with the AIVC community through our events, publications and online resources. For regular updates, visit our [website](#), follow us on [LinkedIn](#) and [Bluesky](#), and explore our monthly newspaper, [Energy Efficiency and Indoor Climate in Buildings](#).

Arnold Janssens & Peter Wouters, Operating Agents, AIVC

30 September - 1 October 2026, Incheon, Korea – 46th AIVC conference

The 46th AIVC conference 'Innovations in Smart Ventilation and IEQ for Resilient and Adaptive Buildings' will take place on September 30 & October 1, 2026 at the Songdo International District in Incheon, Republic of Korea. This international event will be held jointly with the 14th TightVent Conference and the 12th venticool Conference.

The conference is organized by [INIVE](#) on behalf of the [AIVC](#), [TightVent](#) and [venticool](#) in collaboration with the Korean Institute of Civil Engineering and Building Technology ([KICT](#)) and the Korean Institute of Architectural Sustainable Environment and Building Systems ([KIAEBS](#)).

The conference will feature a mixture of presentations selected from the call for papers & topical sessions as well as invited contributions, all organized into well-prepared and structured sessions aligned with the conference theme and topics. In addition, the event will include an exhibition from industry, offering attendees the opportunity to engage with leading partners showcasing innovative solutions and technologies.

Conference Topics

Smart ventilation and IEQ (Indoor environmental quality): Sensor-based real-time IAQ monitoring and control systems; Integration of ventilation with smart building management systems (BMS); Whole-building energy modeling to evaluate IEQ strategies; Application of innovative materials for smart ventilation and IEQ enhancement; Occupant-responsive ventilation strategies; Innovative HVAC systems for enhanced energy efficiency and reduced environmental impact; Impact of smart ventilation on health, comfort, and productivity; Inspection, monitoring, maintenance, reliability and durability of ventilation systems; Standards, policies and legislation.

Building and ductwork airtightness: Measurement techniques for building and ductwork airtightness; Innovative sealing materials and construction practices; Effects of air leakage on HVAC performance and energy use; Long-term performance and durability of airtight construction; Airtightness requirements in building codes and regulations.

Ventilative cooling - Resilient cooling: Climate adaptation and urban resilience through sustainable cooling; Performance evaluation of ventilative cooling in various climates; Integration of ventilative cooling in zero energy buildings; Occupant perception and satisfaction of IEQ; Standards, policies and legislation.

For further information please visit the [conference website](#).



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21-22 April 2026, AIVC Workshop, Madrid, 'Climate Change, Ventilation and Resilience'

The Air Infiltration and Ventilation Centre (AIVC) together with the Eduardo Torroja Institute for Construction Science (IETcc-CSIC) and [venticool](#) are organising a workshop entitled 'Climate Change, Ventilation and Resilience' to be held on 21-22 April 2026 at the Instituto de Ciencias de la Construcción Eduardo Torroja, Madrid.

The workshop will provide an opportunity for Spanish researchers and professionals, as well as international experts, to present and discuss recent advances in relation to the challenges that climate change imposes on buildings, related to indoor environmental quality, ventilation, human health and sustainability.

This workshop is part of a series of annual international workshops organised by AIVC in collaboration with international research centres. These events also focus on local issues related to ventilation and infiltration as part of the knowledge generation process. At the Madrid workshop, the following topics will be discussed:

- Ventilation systems and climate resilience
- Indoor Environmental health
- Assessment of IAQ in naturally ventilated dwellings
- IAQ remediation by smart materials and air cleaning
- Sustainable cooling in cities
- Personalised Environmental Control Systems (PECS)
- Case studies in relation to the workshop topics

The full programme, registration details, and more are available [here](#).

Technical Note 75: Design guidelines for energy recovery ventilation

The AIVC is pleased to announce the release of a new AIVC publication:

[TN 75: Design guidelines for energy recovery ventilation to improve its actual contribution to energy savings in buildings](#)

This design guideline explains the key

principles for successfully reducing HVAC energy use through energy recovery systems. It addresses the reduction of heating and cooling load associated with ventilation and infiltration, as well as the reduction of energy use by fans and heat generators. To support these recommendations, the publication also outlines relevant performance indices and testing standards for energy recovery systems.

All AIVC publications are freely available on the AIVC website. Access them [here](#).

17 March 2026, AIVC Webinar – Airtightness in Practice: Long-Term Performance, Field Evidence, and Innovative Detection Methods

This webinar follows up on contributions presented at the [Buildair 2025 Symposium](#) in Hannover and brings these insights to a wider international audience.

Airtightness of the building envelope is essential for energy efficiency, thermal comfort, moisture safety and indoor air quality. Although increasingly required by building regulations worldwide, questions remain about long-term durability, the gap between targets and real performance, and reliable leak detection methods.

The webinar will present rare field data from a passive house after 16 years of operation, highlighting the long-term integrity of airtight envelopes. Experience from multifamily buildings in the Czech Republic will illustrate the differences between expected and measured airtightness levels in practice. In addition, innovative acoustic leak detection methods, tested both in laboratories and in the field, will be introduced. The session will conclude with a presentation of the activities of FLiB, the German association dedicated to airtightness in construction.

This webinar is organized by the [AIVC](#), [e.u. \[z.\]](#) (Energie- und Umweltzentrum am Deister GmbH) and [TightVent](#). The event is facilitated by [INIVE](#).

AGENDA (CET)

- 10:00 | Welcome from Energie- und Umweltzentrum, Wilfried Walther (e.u.[z.] ,

Germany)

- 10:05 | Passive house measurement after 16 years – is airtightness of the envelope still intact? Lars Due (Isolink, Slagelse, Denmark)
- 10:20 | Q&A
- 10:25 | Airtightness of multifamily buildings in Czech Republic – theory versus reality, Jiri Novak (Czech Technical University in Prague, Czech Republic)
- 10:40 | Q&A
- 10:45 | Acoustic Leak Detection in Building Envelopes – Laboratory and Field Tests, Markus Diel (Deutsches Zentrum für Luft- und Raumfahrt e.V., Germany)
- 11:00 | Q&A
- 11:05 | Updates on Building Airtightness in Germany, Oliver Solcher (Fachverband Luftdichtheit im Bauwesen, Germany)
- 11:10 | Q&A
- 11:30 | End of webinar

The webinar is free to attend, but registration is required. You can register via the link provided [here](#).

Video: AIVC – History, Mission and Recent results

During the Energy in Buildings and Communities (EBC) Technical Day held at CEPT University in November 2025, Arnold Janssens, Operating Agent of the AIVC, delivered a presentation on its history, mission and recent achievements.

In his talk, he highlighted the role of AIVC as the information centre on energy-efficient ventilation for good indoor air quality within the IEA EBC Programme, as well as its long-standing contribution to the dissemination of knowledge on air infiltration and ventilation in buildings. Recent outcomes on smart ventilation assessment were also highlighted.

Established more than four decades ago, AIVC is today the longest-running ongoing EBC Annex (Annex 5), supporting research and knowledge exchange on ventilation, energy performance and indoor environmental quality (IEQ).

A recording of the presentation is now available [here](#).



AIVC projects on IAQ metrics and gas-phase air cleaning successfully completed

The AIVC is pleased to announce the completion of two projects addressing key emerging topics in the field of indoor air quality (IAQ) and ventilation: 'IAQ Metrics' and 'Supplementing Ventilation with Gas-phase Air Cleaning.'

Both projects aimed to advance knowledge and stimulate discussion within the international ventilation and building science community, providing new insights through publications, conferences, and webinars.

AIVC project 'IAQ Metrics'

In recent years, numerous new sensors have entered the market claiming to provide accurate measurements of indoor air quality. Many of these are low-cost sensors, enabling large-scale deployment in buildings. This development raises an important question: what should be considered the appropriate metric for assessing indoor air quality?

While several metrics have been proposed in the past—most notably CO₂ concentration and total volatile organic compounds (TVOC)—only CO₂ has been widely adopted in applications related to buildings and HVAC systems. Despite ongoing discussions, no clear consensus has yet been reached on a comprehensive IAQ metric.

The AIVC project on IAQ Metrics aimed to re-launch and structure this discussion by examining existing approaches, their advantages and limitations, and the challenges associated with developing future IAQ metrics.

Objectives:

The project sought to:

- Document and discuss the current state of the art in the development of IAQ metrics
- Identify research needs and future directions for the development of IAQ metrics

Key publications:

- Ventilation Information Paper (VIP 36): Metrics of Health Risks from Indoor Air
- Contributed Report 22: Quantifying population harm from indoor air contaminants in dwellings

Knowledge dissemination

Results from the project were shared through multiple events, including:

- Clima 2016 (Aalborg, Denmark) – Topical session on the 2020 agenda for ventilation and air infiltration
- 37th AIVC-ASHRAE IAQ Joint Conference (2016, Alexandria) – Keynote and topical sessions on defining IAQ metrics
- 38th AIVC Conference (2017, Nottigham) – Session on health outcomes of ventilation
- 39th AIVC Conference (2018, Juan-les-Pins) – Session on development of IAQ metrics

Additional dissemination included workshops and webinars such as the 2017 webinar 'On the quest for indices defining Indoor Air Quality: What is a reasonable approach?'

For further information please visit the project's [webpage](#).

AIVC project 'Supplementing Ventilation with Gas-phase Air Cleaning'

The international indoor environmental quality standards ISO 17772-1 and EN 16798-1 allow for a possible reduction in ventilation requirements when gas-phase air cleaning is used. This concept has been further investigated in IEA EBC Annex 78.

The AIVC project 'Supplementing Ventilation with Gas-phase Air Cleaning' supported these developments by working closely with Annex 78 and helping disseminate the knowledge generated.

Objective

The main objective of the project was to disseminate knowledge on the use of gas-phase air cleaning as a supplement to ventilation.

Key topics addressed included:

- Concepts for substituting or supplementing ventilation with gas-phase air cleaning
- Available technologies
- Energy implications
- Testing methods
- Long-term performance

Key publications

- Ventilation Information Paper (VIP 42): The Concept for Substituting Ventilation by Gas Phase Air Cleaning
- Contributed Report 20: A Method for

Testing Gas-Phase Air Cleaners

- Contributed Report 21: Performance of Portable Gas-Phase Air Cleaners and Impact on Indoor Air Quality – A Literature Review

Knowledge dissemination

Project outcomes were presented at several AIVC conferences, including:

- 39th AIVC Conference (2018, Juan-les-Pins) – Session on implementing gas-phase air cleaning and its energy implications
- 40th AIVC Conference (2019, Ghent) – Session on IEA EBC Annex 78
- 43rd AIVC (2023, Copenhagen) – Session on energy performance of gas-phase air cleaning
- 45th AIVC-ASHRAE-IEQ Conference (2025, Montreal) – Session on Annex 78 and its implementation

The topic was also addressed through dedicated webinars, including:

- IEA EBC Annex 78: Substituting Ventilation by Gas Phase Air Cleaning – An Industry Webinar (2022)
- Energy Performance of Gas Phase Air Cleaning (2025)

For further information please visit the project's [webpage](#).

EBC Annex 86 deliverables available

The final publications from IEA EBC Annex 86 – Energy Efficient Indoor Air Quality Management in Residential Buildings are now officially available.

Here's what you can now access:

- D1 – A comprehensive literature list on energy-efficient IAQ management
- D2 – An open registry for rating IAQ management strategies
- D3 – Practical methods and tools to evaluate IAQ strategies
- D4 – Real-world applications of energy-efficient IAQ management
- the Project Summary Report

All documents are freely accessible [here](#).



Feedback from AIVC Webinars – October 2025 to February 2026

During the period October 2025 to February 2026, the Air Infiltration and Ventilation Centre (AIVC) organized three webinars:

10 October 2025: Comparing Ventilation Trends in Southern Europe: Italy, France & Spain

- 151 participants
- Organizer: AIVC & TightVent
- Recordings & Slides available [here](#)

25 November 2025: From Inspections to IAQ Measurement: Exploring Databases for Better Indoor Environments

- 120 participants
- Organizer: AIVC & TightVent
- Recordings & Slides available [here](#)

4 December 2025: Improving Indoor Air Quality in Schools

- 153 participants
- Organizer: AIVC
- Recordings & Slides available [here](#)

The full collection of past events' recordings and slides can be found [here](#). Check them out and subscribe to our [YouTube channel](#) to receive our latest video updates!

ANNEX 5



AIVC Technical Note 75

A design guideline of energy recovery ventilation to improve actual contribution to energy saving in buildings

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Main Authors

Takao Sawachi, Building Research Institute, National Research and Development Agency, Japan
Tetsuzoh Kato, Center for Better Living, General Incorporated Association
Satoru Mineno, Architectural Environment Solutions, Co., Ltd.

Reviewers

Willem de Gids, VentOude
Iain Macdonald, National Research Council Canada
Boualem Ouachta, National Research Council Canada
Peter Wouters, IBIVC

Technology Collaboration Programme

AIVC's Technical Note 75: Design guidelines for energy recovery ventilation

AIVC • List of board members

Australia: Nigel Goodman, University of Canberra • Shamila Haddad, the University of Sydney

Belgium: Hilde Breesch, KU Leuven • Lula Timmerman, FPS Public Health

Canada: Liang (Grace) Zhou, National Research Council Canada • Iain Macdonald, National Research Council Canada

Denmark: Bjarne Olesen, Technical University of Denmark • Alireza Afshari, Aalborg University Copenhagen

France: Laure Mouradian, CETIAT • Gaëlle Guyot, CEREMA

Greece: Giorgos Panaras, University of Western Macedonia • Theo Tountas, FUV Group

Italy: Michele Zinzi, Enea

Ireland: James McGrath, Maynooth University • Marie Coggins, University of Galway

Japan: Takao Sawachi, Building Research Institute • Yoshihiko Akamine, NILIM

Netherlands: Wouter Borsboom, TNO

New Zealand: Manfred Plagmann, BRANZ • Yu Wang, BRANZ

Norway: Kari Thunshelle, SINTEF Byggforsk

Republic of Korea: Yun Gyu Lee, Korea Institute of Construction Technology • Dong Hwa Kang, University of Seoul

Spain: Pilar Linares Alemparte, The Eduardo Torroja Institute for Construction Science - CSIC • Sonia García Ortega, The Eduardo Torroja Institute for Construction Science - CSIC

UK: Benjamin Jones, University of Nottingham • Maria Kolokotroni, Brunel University London

USA: Andrew Persily, NIST • Iain Walker, LBNL

Operating agent

INIVE vzw, www.inive.org, info@aivc.org

Arnold Janssens and Peter Wouters, operating agents • Maria Kapsalaki, senior consultant

AIVC board guests

Nemalen Chetty • Willem de Gids • Gilles Flamant • Laszlo Fulop • Constanza Molina • Max Sherman • Hiroshi Yoshino

Representatives of organisations

Meli Stylianou, IEA EBC, <http://www.iea-ebc.org/>

Carsten Rode, IEA EBC Annex 86, <https://annex86.iea-ebc.org/>

Pawel Wargocki, IEA EBC Annex 78, <https://annex78.iea-ebc.org/>

Jelle Laverge, IEA EBC Annex 86, <http://annex86.iea-ebc.org/>

Bjarne Olesen, IEA EBC Annex 87, <https://annex87.iea-ebc.org/>

Peter Holzer, IEA EBC Annex 97, <http://annex97.iea-ebc.org/>

Jensen Zhang, IJV, <https://www.tandfonline.com/loi/tjov20>

Jaap Hogeling, REHVA, www.rehva.eu

Alireza Afshari, IBPSA, www.ibpsa.org

Wenjuan Wei, ISIAQ, <https://www.isiaq.org/>

Livio Mazzarella, IEQ-GA, <https://ieq-ga.net/>

Simon Jones, AIVC Industry Advisory Committee Chair