

Foreword



We are happy to present the July issue of the venticool newsletter, bringing together recent developments, upcoming events, and new resources from across the resilient ventilative cooling community.

One of the highlights of this edition is the AIVC–venticool–TightVent Joint Conference, taking place from 30 Sep to 1 Oct 2026 in Incheon. Take advantage of the extended early bird registration rate by registering before July 17, 2026. We also invite you to register for the upcoming PECS webinar, on 18 Sep 2026, which will present the literature review carried out within EBC Annex 87.

This issue also features the presentations from the AIVC–venticool April 2026 Workshop, available online, together with a new AIVC-venticool publication on overheating assessment and ventilative cooling in national building codes. In addition, we introduce a new open-source tool developed to assess the potential effectiveness of ventilative cooling strategies in the early design stages, providing valuable guidance for both researchers and practitioners.

Readers will also find the latest developments from EBC Annex 87 & 97 as well as product news and innovations shared by our industry partners.

To stay informed about our activities, be sure to visit our [website](#), follow us on [Bluesky](#) and read our monthly newsletter, "[Energy Efficiency and Indoor Climate in Buildings](#)".

We also invite you to follow the new [venticool LinkedIn page](#), where we will regularly share the latest news, publications, events, and more!

The venticool team

30 Sep – 1 Oct 2026, AIVC – venticool – TightVent joint Conference, Incheon, Republic of Korea

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

The conference is organized by INIVE on behalf of the AIVC, TightVent Europe 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.

Registration is open [here](#).

Take advantage of the extended early bird registration rate by registering before **July 17, 2026**. For further information please visit the [conference website](#).

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AIVC-venticool April 2026 Workshop Presentations

We are pleased to share that the presentation slides from the AIVC 2026 workshop "Climate change, ventilation, and resilience" are available online. The event brought together researchers, industry professionals, and 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. Key topics included:

- Ventilation systems and climate resilience
- Indoor environmental health
- Assessment of IAQ in naturally ventilated dwellings
- IAQ remediation through smart materials and air cleaning
- Sustainable cooling in cities
- Personalised Environmental Control Systems (PECS)

A [presentation](#) of particular interest to the venticool community was "Overheating Assessment & Ventilative Cooling in National Building Codes Regarding Indoor Environmental Quality and Energy Performance", delivered by Hilde Breesch (KU Leuven), presenting the findings of venticool's [recent publication](#), developed in collaboration with the AIVC.

Access the presentation slides [here](#).

New Publication: Overheating assessment & ventilative cooling in national building codes

Venticool is pleased to announce the release of a new [AIVC Technical Note](#) presenting the results of a cross-country survey on overheating and ventilative cooling practices.

This document provides practitioners with an overview of the current status of national building codes regarding indoor environmental quality (IEQ) and energy performance, with a focus on how they address overheating and ventilative cooling in buildings. The review focuses primarily on building codes applicable to new buildings in cold and moderate climates, where regulations have

traditionally prioritized heating performance. To support this objective, a cross-country survey was conducted in 2024-2025, gathering insights into how different countries and regions are tackling both overheating and ventilative cooling.

Explore [this](#) and other AIVC publications, freely accessible on the AIVC website, [here](#).

Register for the PECS webinar | 18 Sep 2026 (13:30-15:00 CEST)

Personalised Environmental Control Systems (PECS) allow occupants to adjust their immediate surroundings without affecting others, offering the potential to enhance comfort, health and well-being while improving building energy efficiency.

This webinar will present the state of research and development across the four environmental domains PECS address, drawing on activities developed within IEA EBC Annex 87. It opens with the human benefits of thermal and indoor air quality PECS, followed by an overview of the methods used to evaluate their thermal comfort, indoor air quality and energy performance. Two further presentations extend the concept beyond its established thermal and air quality roots into the emerging visual and acoustic domains. Together, the presentations map current evidence, evaluation approaches and knowledge gaps in personalised environmental control.

The webinar programme includes presentations by Ongun Berk Kazanci (DTU), Dolaana Khovalyg (EPFL), Ilaria Pigliautile (CIRIAF), Alessandra Luna Navarro (TU Delft) and Simone Torresin (University of Trento), with dedicated Q&A sessions following each presentation.

The webinar is organised by IEA EBC Annex 87, AIVC and venticool, and facilitated by INIVE.

Registration is now open [here](#).

Update from EBC Annex 97 / Cities TCP Task 5

Philipp Stern – Institute of Building Research & Innovation

IEA EBC Annex 97 / Cities TCP Task 5 "Sustainable Cooling in Cities" an international research collaboration

bringing together participants from more than 15 countries — entered its active working phase in January 2026. The Annex has established a cooperation with AIVC and venticool to broaden the reach of its research outcomes. Here is a short overview of the latest developments.

First Expert Meeting and Policy Workshop in Madrid

On 22 April 2026, Task 5 held a public policy workshop, "Policy in Practice: The Spanish Urban Perspective on Sustainable Cooling," hosted at the Instituto de Ciencias de la Construcción Eduardo Torroja in Madrid and chaired by Aurora Monge Barrio (Universidad de Navarra) and Theofanis Psomas (Munster Technological University). The hybrid event attracted strong interest, drawing over 50 attendees and six speakers from Spanish ministries, the City of Madrid and the Barcelona Metropolitan Area, industry, and green organisations — a clear signal of the engagement of national experts and stakeholders on urban cooling.

The workshop was followed by the first two-day Expert Meeting on 23–24 April. Among the outcomes: the project's first major deliverable, the State-of-the-Art Report (SOTAR), is nearing completion; a biweekly online seminar series open to the public was launched (first session on 27 May 2026); and a dedicated working group on cooling solutions for the Global South was established.

A New Urban Cooling Database

A central new activity is the development of an Urban Cooling Database that will make the large body of research on urban cooling easier to access for practitioners, planners, and city authorities. The framework is currently being developed under the leadership of the team at Politecnico di Torino, while Aalborg University will host the database. It will be embedded in the official Task 5/Annex 97 website, with tailored access for different audiences — a concise, accessible layer for practitioners and planners alongside more detailed technical records for researchers. Content will be populated throughout the project, starting with the material compiled in the SOTAR.

Coming Up: Policy Workshop and Second Expert Meeting in Cork

The next policy workshop and the second

Expert Meeting will take place at Munster Technological University (MTU) in Cork, Ireland, from 28 to 30 October 2026. The accompanying policy seminar on 28 October will focus on indoor overheating in temperate oceanic climates — a topic of particular relevance to the ventilative cooling community — followed by a session on the latest Annex 97 research.

More information on Task 5 is available at annex97.iea-ebc.org and via the [Annex 97 LinkedIn page](#).

Latest Developments from EBC Annex 87

Ongun Berk Kazanci– DTU, Denmark

IEA EBC Annex 87 focuses on the energy and Indoor Environmental Quality (IEQ) Performance of Personalised Environmental Control Systems (PECS). The objective of Annex 87 is to establish design criteria and operation guidelines for PECS, and to quantify the benefits regarding health, comfort and energy performance. This includes also control concepts and guidelines for operating PECS in spaces with general ambient systems for heating, cooling, ventilation, and lighting. There are about 50 active participants from 18 countries, providing broad and international input. Annex 87 is structured to reflect these objectives. Subtask A focuses on fundamentals, Subtask B focuses on PECS applications and technologies, Subtask C focuses on controls (including operation and system integration), Subtask D focuses on IEQ and energy performance evaluation, and Subtask E focuses on policy development and advocacy actions.

The main outcome of Annex 87 so far is three review papers that detail the performance of PECS. These papers are:

- Personalized Environmental Control Systems (PECS): Systematic Review of Benefits for Thermal Comfort, Air Quality, Health, and Human Performance
- Personalized Environmental Control Systems (PECS): A systematic review of performance evaluation methods for thermal comfort, air quality and energy
- Definition and Performance of Acoustic Personalised Environmental Control Systems (Acoustic PECS): A Systematic Review

In addition to these published papers, there is work ongoing on several other

review papers that will identify the performance and requirements of PECS in different aspects.

In addition to the review activities, the group is also working on developing a PECS Wikipedia (to be hosted under the obtained thepecs.org website), PECS simulation methodology, round-robin tests, industry survey, and list of commercially available PECS. These activities are expected to help spread the knowledge about PECS and also help practitioners follow unified performance evaluation methods, and evaluation criteria.

It is expected that the results of Annex 87 will feed into the revision of EN 16798-1/2 and ISO 17772-1/2, which are European and International standards that specify the requirements for indoor environmental parameters for thermal environment, indoor air quality, lighting and acoustics, and how to establish these parameters for building system design and energy performance calculations. There is a large interest in the annex both from researchers and from practitioners. In the remainder of the project period, the group will focus on developing design, operation, and evaluation guidelines based on the results which will help turn PECS into a more mainstream indoor environmental design solution to improve occupant comfort, improve energy performance, and possibly contribute to a more sustainable building design practice.

Follow venticool on LinkedIn!

We're excited to announce the launch of the official venticool LinkedIn page!

We'll use our LinkedIn channel to share the latest developments from the community, including:

- Announcements of events and webinars
- Research highlights and publications
- News from the venticool community and partners

Whether you're an architect, engineer, researcher, consultant, policymaker or building professional, we invite you to follow our page and join the conversation.

Follow us [here](#).

New Open-Source Tool for Evaluating Ventilative Cooling Strategies

We are pleased to share that EURAC Research, has officially released VentiCoolPy, a new open-source Python library and accompanying web-based tool designed to support the evaluation of ventilative cooling strategies in buildings.

As cooling demand continues to rise across Europe, ventilative cooling — the use of outdoor air to reduce or replace mechanical cooling — is becoming an increasingly important passive design strategy. However, assessing its effectiveness during the early design stages has often been complex and time-consuming.

To address this challenge, EURAC Research developed VentiCoolPy, an open-source solution that enables users to evaluate the cooling potential of ventilative cooling approaches through hourly thermal energy balance calculations. The tool helps quantify how much mechanical cooling demand can be offset through natural or mechanical ventilation, while also providing key insights into the ventilation rates required for effective operation. The initiative is available in two complementary formats:

- For researchers and developers: [a Python library](#) that can be integrated into custom workflows and simulation environments
- For designers and practitioners: [a free web-based application](#) accessible directly through the browser, with no coding required

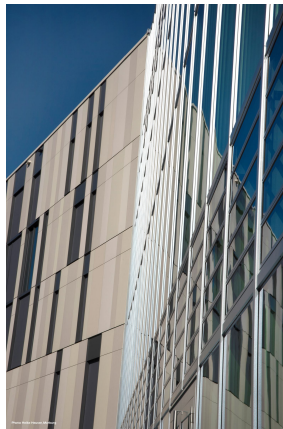
Users can upload climate data, define project specifications, and immediately explore ventilative cooling performance indicators to support climate-responsive building design.

The development team also welcomes feedback, collaborations, and contributions from the building energy and passive cooling communities. Please contact [Annamaria Belleri](#) for further information.

Product new as provided by our partners

New possibilities for façade-integrated ventilation

What happens when louvre window expertise meets intelligent façade automation? You get a more coordinated way to deliver fresh air, indoor comfort and fire safety through one integrated façade solution. WindowMaster and FIEGER combine large blade louvre systems with automation, controls and ventilation strategy to help simplify complex projects from early design to operation. For architects, engineers and façade specialists, it means one clearer path to performance, reliability and energy-efficient building design — without losing sight of architectural intent. Explore how integrated façade ventilation can help bring comfort, safety and technical confidence together in your next project. Explore the integrated façade solution [Façade automation meets louvre window expertise](#).



DUCO: tackling overheating through ventilative cooling and solar shading

Overheating is an increasingly common challenge in well-insulated buildings, often addressed with energy-intensive air conditioning. DUCO offers a more sustainable alternative, combining ventilative cooling with external solar shading to regulate indoor temperature naturally in both residential and non-residential buildings. Following the Cooling Hierarchy - keep heat out, extract excess heat, then deploy active cooling only as a last resort - solar shading blocks direct sunlight, reducing indoor temperature by up to 12 %. Strategically placed ventilation hatches and skylights then utilise natural airflows to passively cool the building, working synergistically with solar shading to maximise efficiency. Together, these solutions deliver a comfortable indoor climate during warm periods, without the high energy costs associated with active cooling systems.

[Learn how to prevent overheating →](#)

What is venticool?

venticool is the international ventilative cooling platform launched in October 2012 to accelerate the uptake of ventilative cooling by raising awareness, sharing experience and steering research and development efforts in the field of ventilative cooling. In 2020, venticool decided to broaden its scope towards resilient ventilative cooling. The platform supports better guidance for the appropriate implementation of resilient ventilative cooling strategies as well as adequate credit for such strategies in building regulations. The platform philosophy is to pull resources together and to avoid duplicating efforts to maximize the impact of existing and new initiatives. venticool joins forces with international projects (in particular IEA EBC annex 62 (ventilative cooling), annex 80 (Resilient cooling for buildings) and, more recently, annex 87 & 97 and organizations with significant experience and/or well identified in the field of ventilation and thermal comfort like AIVC (www.aivc.org) and REHVA (www.rehva.eu). The platform has been initiated by INIVE with (International Network for Information on Ventilation and Energy Performance) with the financial and/or technical support of its partners.

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To join venticool please visit: <https://venticool.eu/venticool-contact/>

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venticool
the platform for resilient ventilative cooling