

IEA Technology Collaboration Programme on Energy in Buildings and Communities Webinar

# Reducing the Performance Gap between Design Intent and Real Operation

Friday 11<sup>th</sup> June 2021 12:00 - 14:30 UTC / GMT

08:00 - 10:30 (Washington DC, USA)

14:00 - 16:30 (Amsterdam, NL)

21:00 - 23:30 (Tokyo, JP)



**FREE** – Participation in the Webinar is free

**Registration is required**: A link to join the webinar will be included in the email confirmation

Extensive research studies in many countries have found gaps between the design intent and real-world operation of buildings, which often lead to much higher energy use in practice than was estimated at design stage. While the reasons for such performance gaps are varied and complex, IEA Energy in Buildings and Communities (EBC) research projects have recently been making progress in resolving them. The aim of this webinar is to share the outcomes of ongoing EBC research projects in this area and to provide updates on some of the innovative work taking place within the programme: high quality energy reporting for buildings at scale allows robust analysis to be carried out and reliable lessons to be learned from the data gathered; data collected for individual buildings using smart meters are helping to understand fabric thermal performance at previously unattainable sample sizes; technologies to supplement ventilation with gas-phase air cleaning are being studied to confirm if both indoor air quality and energy criteria can be achieved; occupant-centric building design and operation are the focus of further EBC research. Although it has not been possible to arrange the planned EBC Technical Day in the Netherlands due to the ongoing pandemic, their national research priorities and some short overviews of their work within the EBC programme will also be provided during the webinar. This is being arranged for the benefit of the scientific and engineering research community, as well as for policy and decision makers in industry and governments. A related webinar organized by the IEA Technology Collaboration Programme on Solar Heating and Cooling (SHC) will be held on Tuesday 15<sup>th</sup> June 2021 (SHC webinar information).

## Programme (UTC / GMT time)

- 4 12:00 | Welcome by **Dr Takao Sawachi**, EBC Executive Committee Chair
- 4 12:05 | Welcome by **Dr Richard Hall**, SHC Executive Committee Vice Chair
- 4 12:10 | Presentations Part 1
- EBC and National Research Priorities in the Netherlands by Daniël van Rijn, EBC Executive Member for the Netherlands
- EBC Annex 70: A New Best Practice Building Energy Model Report Guideline by Dr Ian Hamilton and Prof Laure C.M. Itard
- EBC Annex 71: Quantifying the Thermal Performance of the Building Fabric based on Smart Meter Data by Prof Staf Roels, Dr Christian Struck and Twan Rovers
- Q&A moderated by Daniël van Rijn



- 4 13:15 | Presentations Part 2
- EBC Annex 78: Supplementing Ventilation with Gas-phase Air Cleaning by Prof Bjarne Olesen
- EBC Annex 79: Do Occupants Matter? Comfort and Occupant Behaviour as Relevant Drivers for Building Energy Performance by **Prof Andreas Wagner and Peter Op 't Veld**
- EBC Annex 75: Cost-effective Building Renovation at District Level Combining Energy Efficiency & Renewables by Dr Manuela Almeida and Dr Erwin Mlecnik
- **Q**&A moderated by **Daniël van Rijn** and summary
- **↓** 14:30 | *End of webinar*



### Cost and registration

Participation to the webinar is free but requires you to register for the event. The webinar will be limited to a maximum of 1000 persons. To register, please click on the "Register" button above.

### What is a webinar?

A webinar is a conference broadcasted on internet. To follow a webinar you must have a computer with a sound card and speakers or headphones. Once logged in the "conference room", you will be able to see the slides of the presentation and to hear the panellists' comments. You will also be able to ask written questions to the speakers, and to answer on-line surveys.

#### Hardware, software

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#### About IEA EBC

In recognition of the significance of energy use in buildings, in 1977 the International Energy Agency has established a Technology Collaboration Programme on Energy in Buildings and Communities (EBC). The function of EBC is to undertake research and provide an international focus for building energy efficiency. Tasks are undertaken through a series of 'Annexes', so called because they are legally established as annexes to the EBC 'Implementing Agreement'.

The largest benefits arising from participation in EBC are those gained by national programmes, such as leverage of R&D resources, technology transfer, training and capacity-building. Countries lacking knowledge can benefit from the experiences of those with more expertise, thereby avoiding duplicated research efforts. In particular, countries can most easily realise the benefits of participation if their own experts have taken part in projects and have assisted in producing deliverables taking into account their national requirements and priorities.

At an individual level, the EBC Programme allows researchers and experts funded by national programmes and industry to pool their collective expertise to produce high quality project outputs. By taking part in the projects, they create and reinforce their own technical networks, the benefits of which remain long after the particular project has formally ended. This does not happen quickly, but over the course of three to five years, these networks of expertise become established as excellent international channels of communication.

EBC has currently 26 member countries. All member countries have the right to propose new projects, and each country then decides whether or not to participate on a case by case basis. Most EBC projects are carried out on a 'task shared' basis, in which participating organisations arrange for their own experts to take part. Certain projects are 'cost shared' in which participants contribute funding to achieve common objectives.

The webinar is facilitated by INIVE (www.inive.org).