

Agenda (Version 2)

ISO/TC 163/WG 4 – Joint ISO/TC 163 – ISO/TC 205 WG  
Energy performance of buildings using holistic approach

## Tenth Annual International Workshop Theme: “Responding to Global Challenges”

An international workshop organized by the leadership of the JWG-EPB in collaboration with the leaderships of ISO/TC 163 and ISO/TC 205

Monday 25 September 2023 (Beginning 13:30 Eastern Daylight Time)  
Peachtree Corners, Georgia (USA)

**HOST:** American National Standards Institute (ANSI)

### **VIRTUAL REGISTRATION:**

<https://ashrae.webex.com/weblink/register/r45f71033197fc37f31e7a5f903ac578a>

### **INTRODUCTION:**

It has become tradition to organize a workshop on the occasion of the week with series of meetings of ISO/TC 163, “Thermal performance and energy use in the built environment” and ISO/TC 205, “Building environment design,” with their subcommittees and working groups.

This workshop will be a slight departure from the normal workshops held in the past during this meeting. Previously, focus has been on the development and implementation of the holistic approach to buildings (EPB) through the ISO 52000 series of standards. It has been understood that to be successful there is a need for data and modeling to ensure the accuracy of the assessment of the building. In addition, there is a growing recognition that the built-environment industry is undergoing a dramatic shift and the entire globe has need for the same attention. This workshop will be presented in person to those attending the ISO set of meetings but will also be available virtually as well. The presenters will be a combination of those present and those who will present virtually, so this will be the first time it has ever been available to so wide an audience and the hope is that the information provided will lead to more global cooperation and collaboration in the future.

### **AIM OF THE WORKSHOP:**

This workshop will flow from the needed update of the EPB effort to the various issues and actions addressing the data needed, to how the other members of the Global community are dealing with the challenges they face in regions not heard from in this workshop to date.

**CHAIR:** Prof. Jesper Arfvidsson (Chair of ISO/TC 163) and Mr. Drake Erbe (Chair of ISO/TC 205)

**PROGRAMME:**

<b>BLOCK 1 — THE ISO 52000 FAMILY OF UNIVERSAL EPB STANDARDS FACING THE GLOBAL CHALLENGES</b>	
<b>SPEAKER(S)</b>	<b>PRESENTATION</b>
<p><b>DICK VAN DIJK</b> <i>Convenor of ISO/TC 205/AG 1 (JAG TC 205 &amp; TC 163), Coordination of the ISO 52000 family of EPB standards</i> <i>Co-convenor, ISO/TC 163/WG 4 (JWG TC 163 &amp; TC 205), Energy Performance of Buildings using holistic approach</i> <i>EPB Centre initiator and expert</i></p>	<p><b>The ISO 52000 family is a powerful set. How to improve and expand it further.</b> <i>The set of EPB standards and particularly the (EN) ISO 52000 family of EPB standards is a very powerful series of standards to collectively assess the overall energy performance of buildings using a systemic approach. Most were published in 2017, hence systematically reviewed in 2022. Based on the feedback from a variety of stakeholders around the world, plans are in preparation to make the set fit for the future. Both on technical content and usability, including more digitalized and more global.</i></p>
<p><b>JAAP HOGELING</b> <i>Chair of CEN/TC 371, Energy Performance of Buildings</i> <i>ASHRAE Fellow, REHVA Fellow</i> <i>EPB Centre initiator and expert</i></p>	<p><b>The European Directive (EPBD) as frontrunner for the holistic set of EPB standards</b> <i>One of the triggers for the revision of the set of EPB standards in CEN and ISO is the revision of the European Directive on the Energy Performance of Buildings (EPBD). The new EPBD, expected to be published by the end of 2023 will move from (Nearly) Zero Energy to Zero Emission of Buildings (ZEB), but at the same time respecting the energy efficiency first principle. Also, more attention to the Indoor Environmental Quality (IEQ) in buildings is included: ZEB buildings shall be healthy buildings for people.</i></p>

<b>BLOCK 1 — THE ISO 52000 FAMILY OF UNIVERSAL EPB STANDARDS FACING THE GLOBAL CHALLENGES</b>	
<b>SPEAKER(S)</b>	<b>PRESENTATION</b>
<p><b>LAURENT SOCIAL</b> <i>Independent expert, consultant on energy performance of buildings and industrial systems</i> <i>Author rev. CEN standard on heat pump systems. EPB Centre expert</i></p>	<p><b>Link between product data and EPB calculations. Heat pumps and chillers as example case.</b> <i>In Europe, the characterization of the energy performance of “products” and “buildings” are regulated by different Directives (ErP, EPBD). European standards have been worked out independently for the practical implementation of these two directives.</i> <i>The presentation focuses on how to make the product testing data fit for use as a basis for heat pump system energy calculations and how to harmonize the test conditions for heat pumps, to achieve the necessary consistency and reliability for daily practice.</i></p>

<b>BLOCK 2 — NEXT CHALLENGE: HOW TO PROVIDE REQUIRED INFORMATION TO THE ISO 52000 SERIES, EVOLVING FROM MODELING TO SMART STANDARDS</b>	
<b>SPEAKER(S)</b>	<b>PRESENTATION</b>
<p><b>ARNKELL PETERSEN</b>  <i>Associate professor at the Norwegian University of Life Sciences</i>  <i>Chair of ISO/TC 163/SC 2, Calculation methods</i></p>	<p><b>Standardization of validation methods as a means to open up the use of performance-based methods for calculating the energy performance in the ISO 52000 family</b>  <i>While the set of EPB standards is being reviewed to make them fit for current and future global challenges, building simulation tools are increasingly used to assess the energy performance of buildings. The use of Artificial Intelligence is rapidly spreading. Energy calculations will appear on the market that are not based on physics; can their results be trusted?</i></p>
<p><b>RICHARD LORD</b>  <i>Senior Fellow, Carrier</i>  <i>ASHRAE Fellow</i>  <i>Chair, ASHRAE SSPC 90.1</i></p>	<p><b>New Modeling Approaches in ASHRAE</b>  <i>ASHRAE and ASHRAE Standard 90.1 are committed to improving the energy of commercial buildings. with a goal of carbon neutral by 2031, significant challenge. Key to the continued improvements will be more advanced metric and system level modeling including new approaches for equipment modeling as defined by the new ASHRAE Standard 205, modeling rules as defined by Appendix G of ASHRAE Standard 90.1 and certification of tools through ASHRAE Standard 140. A new modeling approach for mechanical equipment is introduced with the Total System Performance Ratio (TSPR) compliance path. This session highlights the changes in these areas and future plans.</i></p>
<p><b>RALF KYRK</b>  <i>Department Manager and Project Manager for BIM at the Federation of German Heating Industry</i></p>	<p><b>Demonstration Project as a Step Towards SMART Standards</b>  <i>Demonstration project of how product- and system-standards (i.e., ISO 52000 series) can work together and what will be necessary to be ready to step ahead to SMART standards.</i></p>

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<b>BLOCK 3 — GLOBALITY: REGIONAL CHALLENGES</b>	
<b>SPEAKER(S)</b>	<b>PRESENTATION</b>
<p><b>ASHISH RAKHEJA</b>  <i>Director/Chief Operating Officer, AEON  Noida, India</i>  <i>ASHRAE Vice President</i>  <i>Vice Chair, ASHRAE Global Technical  Interaction Committee</i></p>	<p><b>Challenges in the Indian Construction Industry to Achieve Responsible Growth</b>  <i>Challenges in Indian construction industry include lack of operation data, building efficiency benchmarks, limited research environment, people mindset, lack of trained manpower, etc., and a need for global collaboration to ensure the best practices are shared to enable the Indian construction industry to achieve responsible growth.</i></p>
<p><b>OLUDARE SOLUADE</b>  <i>Managing Director, AOS Consulting</i>  <i>Chair, ASHRAE Global Technical Interaction  Committee</i></p>	<p><b>Challenges on the Implementation of the Energy Performance Certificate and its Applications in South Africa that was mandated on 8 Dec 2020.</b></p>
<p><b>FARHAN A. MEHBOOB</b>  <i>Director, S. Mehboob &amp; Company</i></p>	<p><b>Overview of the Various Challenges in Benchmarking the EPB and Setting Appropriate Performance EPB Standards in Developing Economies/Global South</b>  <i>An overview of the various challenges that exist in benchmarking building energy performance and setting appropriate performance EPB standards in developing economies/Global South, including data collation and energy metrics of existing buildings, market economics (high import duties and tariffs) and regulatory environment amongst others.</i>  <i>It is important to recognize that a standard must take into consideration multiple factors that will determine the market acceptability and adoption.</i></p>