REHVA Task Forces
– backbone of the REHVA Technical activities

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REHVA Task Forces

The objective of REHVA Technology and Research Committee is to develop and disseminate technical information for the benefit of REHVA members and supporters, enhance development of standards and research on European level, and increase the REHVA participation and visibility at European level activities.

To achieve these objectives, REHVA has established Task Forces, each with a specific topic. Each Task Force will prepare a REHVA publication, and REHVA Guidebooks are the main outcome of Task Forces. In some cases, a Technical Report is a more suitable outcome, especially in rapidly changing or developing issues.

The tradition of REHVA Task Forces and Guidebooks is rather young. The idea of Guidebooks matured at the end of last Millennium, after several discussions about the needs of practical and reliable documentation of European good HVAC practices, targeted directly to designers and other HVAC practitioners and also to other stakeholders. Finally, in spring 2000, the first action towards a REHVA Guidebook started, with the topic of **Displacement Ventilation**. This topic had been dealt with in numerous research reports, articles in professional journals, commercial brochures etc., but the information there was either fragmented, unpractical or commercially biased.

The format of Guidebooks, and also working practices of Task Forces, developed during the first project and still are much the same: first make a clear working plan and establish a working team, prepare a manuscript within a realistic schedule, and also make sure that the publication will sell.

In late 2002 the first Guidebook was published, and it still is one of the bestsellers. The principles of displacement ventilation are still the same, but technologies have developed and new applications have been commercialized, so the Guidebook No. 1 will be subject to revision which is currently about to start.

Since year 2002, teams of experts from all parts of Europe have participated in the work of Task Forces, often on a voluntary basis. A typical team consists of 4-6 experts, but in a few guidebooks or reports the number of contributors has been up to 20 or even more. All manuscripts are reviewed independently by well recognized experts.

The number of printed Guidebooks reached 20 in June 2013, when three new books were published and on display at Clima 2013 in Prague. At the same time, a Technical Report containing a proposed all-European framework definition of **nearly zero energy building** was published, this is TR 4 but actually the first one resulted from an "ordinary" Task Force – the first three were the collections of Workshop summaries from Clima conferences in 2005, 2007 and 2010. The decision to make a Technical Report was relatively easy: the need to disseminate the TF results was urgent, but the outcome is subject to change very soon, due to many changes "around".

The most successful Guidebooks have one common feature: strong "push" and commitment from the industry.

The working language in the Task Forces is English, as well the official original version of the Guidebook. But as a European organization over 20 languages are spoken within REHVA member associations. To reach better the national professionals the Guidebooks can be translated to national languages. REHVA offers this opportunity as a membership benefit to its members. More than 50 translations (see table below) are available through REHVA National members (contact information at www.rehva.eu).

Translations of REHVA Guidebooks

GB no.	Title	Language
1	Displacement Ventilation	Dutch Finnish German Italian Japanese Latvian Norwegian Portuguese Russian Slovenian Spanish Turkish
2	Ventilation effectiveness	Japanese Latvian Portuguese Slovenian/Serbian
4	Ventilation and Smoking	Portuguese Spanish
5	Chilled Beam Application	French Hungarian Italian Polish Portuguese Slovenian Spanish Turkish
6	Indoor Climate & Productivity in offices	Dutch Italian Japanese
7	Low Temperature Heating and High Temperature Cooling	Portuguese Finnish Hungarian Slovenian Italian Turkish Chinese
8	Cleanliness of ventilation system	German Portuguese Italian
9	Hygiene Requirement for ventilation and air conditioning	Italian Portuguese
10	COMPUTATIONAL FLUID DYNAMICS (CFD) CALCULATIONS in Ventilation Design	Japanese Italian
11	AIR FILTRATION IN HVAC SYSTEMS	Portuguese Italian
12	Solar Shading	Finnish French Swedish Portuguese
13	INDOOR ENVIRONMENT AND ENERGY EFFICIENCY IN SCHOOLS - Part 1 Principles	Portuguese Italian
14	INDOOR CLIMATE QUALITY ASSESSMENT - Evaluation of indoor thermal and indoor air quality	Italian French
16	HVAC IN SUSTAINABLE OFFICE BUILDINGS - A BRIDGE BETWEEN OWNERS AND ENGINEERS	French
17	DESIGN OF ENERGY EFFICIENT VENTILATION AND AIR-CONDITIONING SYSTEMS	Portuguese Turkish

Active REHVA Task Forces (TF) August 2013

Name of the Task Force, Schedule and Chair/contact person	Descriptive objective of the Task Force
Air Conditioning inspections - Technical Guideline, 2012-2015 Chair: Vincenc Butala University of Ljubljana Slovenia vincenc.butala@fs.uni-lj.si	This TF aims to prepare a technical guideline for inspections of air conditioning systems, to support the implementation of Article 15 of the EPBD recast.
Reference Buildings for Energy Performance and Cost-Optimal Analysis, 2012-2014 Chair: Stefano P. Corgnati, Politecnico di Torino, taly stefano.corgnati@polito.it	This TF aims to develop, on the bases of the national experiences, a set of European Reference Buildings/benchmark buildings in order to suggest European wide harmonized database of building types which could be used for cost optimal calculations according to EPBD recast at European level by technicians and researchers. So far ongoing activities on the definition of national approved RBs are being developed and they are still far from being closed. Due to this fact, TF is now focusing in conducting cost optimal analyses and comparing the results of these between different MS in order to give some useful information to policy makers and investors.
Environmental-friendly Refrigerants in HVAC Applications, 2012-2014 Chair: Attila Zoltán Hungarian Coordination Association of Building Engineering attila.zoltan@t-online.hu	This TF aims to prepare a Refrigerant Guidebook which will help to define the optimal system-equipment-refrigerant couple for dedicated applications. The guidebook will introduce how to reduce, optimise the cooling power needed, the environmental impacts and energy efficiency of the equipment, including global parameters of refrigerants (ODP, GWP), energy efficiency (EER, ESEER, COP, SCOP), direct-indirect environmental impacts of equipment, systems, the TEWI (CO_2eq) and TEEI (inversed TEWI, kWheq) comparison methods.
HVAC systems long term impact in buildings valuation, 2013-2015 Chair: Frank Hovorka Caisse des Depots, France frank.hovorka@caissedesdepots.fr	HVAC related building performance is often insignificant in the context of an overall building evaluation made by potential investors. The TF thus aims at bridging the gap between HVAC engineers and building investors by translating typical HVAC system benefits into tangible financial benefits for the overall valuation of real estate. "Global costs" considering functionalities, investments costs and operation & maintenance issues are taken into account and the methodologies for translating the HVAC benefits to real-estate valuation will be presented and demonstrated with real life examples.
Energy refurbishment, 2013-2015 Chair: Marija S. Todorovic Academy of Engineering Sciences of Serbia deresmt@eunet.rs	EnRef TF aim is to prepare guidebook/s on the topic of the energy refurbishment encompassing holistic approach to the deep energy renovation of existing buildings, to the level of energy efficiency and renewable energy sources (RES) integration that ensures clear "zero" or "net zero" energy quality of the refurbished buildings status. TF promotes large-scale RES integrated buildings structure/ HVAC refurbishment technologies development, as well as necessary R&D to commercialize "RES Integrated Energy Refurbishment Construction/HVAC - Industry" as a whole integrated engineering process.
nZEB Nearly Zero Energy Buildings, 2012-2015 Chair: Jarek Kurnitski Tallinn University of Technology, jarek.kurnitski@ttu.ee	nZEB TF revised REHVA nZEB technical definition during 2012-2013, with the aim to help the experts in the Member States to define the nearly zero energy buildings in a uniform way. The revision, coordinated with CEN project group preparing 2nd generation EPBD standards, was published in June 2013 (REHVA REPORT NO 4, 2013). The work will continue as a new task force focusing on nZEB case studies/ technology with on site and nearby production and trying to find assessment method/indicator for "real addition" of RE energy and optimal performance on energy system level.

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Combined Heat and Power (CHP) for buildings, 2012-2015 Chair: Klaus Sommer Cologne University of Applied Sciences Germany klaus.sommer@fh-koeln.de	In order to achieve the EU targets on energy savings and on reduction of greenhouse gas emissions the decentralized cogeneration (CHP) on individual building level can play an important role. This TF will produce a REHVA guidebook that covers different technologies of small and middle size CHP for different applications. Key aspects are system engineering and control, system operation and economic feasibility that will be derived from field tests and practical applications.
Fire safety in buildings: Smoke management guidelines, 2012-2014 Chair: Othmar Braendli Belimo Switzerland othmar.braendli@belimo.ch	This TF aims to prepare state of the art guidebook on fire & smoke solutions. It will provide approved fire & smoke solutions and show latest status of European fire & smoke standards and regulations.
Heat pump applications in refurbishment, 2012-2014 Chair: Branimir Pavkovic Croatia branimir.pavkovic@riteh.hr	This TF will produce a new guidebook on heat pump applications for new buildings and for refurbishment. Heat pumps can in some cases efficiently be implemented in existing systems of heating and cooling, providing cost effective solution in refurbishment. Limits of such application and proper system design will be discussed. General information suitable for target groups will be provided.
Cold climate design guide (ASHRAE/REHVA), 2012-2015 Chair: Bjarne Olesen, Technical University of Denmark bwo@byg.dtu.dk	This TF aims to prepare a cold climate design guidebook in cooperation with ASHRAE.
Weather Data Directory, 2012-2014 Chair: Livio Mazzarella, Italy Livio.mazzarella@polimi.it	The aim of this task force is to develop, on the bases of the worldwide available information, a weather data directory for HVAC design and performance simulation, which collects in a simple and concise way all references to national and/or regional weather data, their availability, statistical validity and application purposes.
Commissioning process Reactivation of the old TF, contact person: Ole Teisen, Ole.Teisen@grontmij.dk	In spite of the many standards there are different approaches to the commissioning process, and a lot of work is done in the name of Commissioning that is not adding any value to the buildings. We need more stringent requirements for verification of buildings and systems in order to verify planned energy savings and achieve sustainability certification. To achieve these aims, this TF will prepare guidelines and guidance on the Commissioning process. Besides supporting the Commissioning requirements of various sustainability certification programmes, the guidebook shall serve as a tool when doing a commissioning process on refurbishments.
Indoor environment in the implementation of policies and technologies for energy efficient buildings New proposal by FINVAC	There is a need a position paper on indoor environmental issues aimed at policy makers and authorities to point out the potential conflict between energy efficiency and indoor environment and to develop protocols and criteria for design and construction and operation practice.
Displacement ventilation New proposal by TRC	Existing displacement ventilation guidebook is sold out and already so old that needs to be updated. TRC will initiate new TF with the aim to revise and publish new displacement ventilation guidebook.