

Outcome of the CLIMA 2022 congress – a blueprint for further actions!

After a very successful CLIMA 2022 some may feel exhausted. But the climate-crisis, the impact of the war in Ukraine on European on our safety and the continuing COVID epidemic doesn't allow us to slow down. For Europe the REpowerEU is added to the policy initiatives: Greenddeal, the Renovation Wave and the Fit for 55 towards Zero Carbon emission by 2050.

The well-chosen core themes of CLIMA 2022 are reflecting our top priorities for the coming years:

- Energy efficiency and decarbonisation
- Health and Comfort (IEQ) with an emphasis on indoor air quality and ventilation
- Circularity, in relation to the renovation wave a focus of reuse of our systems and buildings where possible and forward thing with new building and system design.
- Digitization, essential to support the Energy, Decarbonisation and Circularity possible and future sustainable.
- Learning and Education, essential to upgrade and expand our professional workforce.

The presentations at CLIMA 2022 include a lot of information on these themes, for those who didn't yet have the opportunity to join sessions the papers and several live-streams are still online for those who registered for the conference. In the coming RJ issues, we will publish selected articles on the various themes.

The expected EPBD revision by the end of this year will have its impact on the current set of EPBD standards. We expect the use of hourly calculation procedures to assess the Energy Performance of Buildings with a clear focus on decarbonisation. The already planned revision of the IEQ standard EN 16798-1 will also focus on the COVID guidance published by REHVA regarding the IAQ and ventilation requirements. For most of the EPB standards we expect that updates are needed. This work is expected to start in 2023 if resources are available to support this.

Some observations regarding the Annex III of the EPBD draft:

When focussing on operational decarbonisation we have to realise that some concepts we use on basis of the current 2018 EPBD and the EN ISO 52000-1 where the focus is on energy efficiency and the use of renewables, should be reviewed. This focus on renewables lead to the introduction of RER the Renewable Energy Ratio. This concept encourages to report on renewables used. Depending on the assessment boundary: ambient energy, ground source energy, free cooling etc. could be added to the equation calculating the amount of renewables used. This may be an interesting number in relation to the non-renewable part of the energy use. But it is the non-renewable part we have to focus on.

The concept of "total primary energy" as also included in the current EPBD proposal is confusing if we want to consider a carbon neutral approach. We should only focus on minimising the non-renewable primary energy still used in buildings. Where still needed compensate this non-renewable amount by renewable production onsite, nearby or from the grid. To avoid that this may lead to poor EP buildings it is wise to maximise this allowable non-renewable energy use, as proposed in Annex III of the EPBD. Renewable energy from on-site nearby or the grid should not be used to compensate for poor performing buildings or building use.

In this context it doesn't make sense to assess renewables contributions from ambient, free air cooling, ground source, etc. In the simple example of a building using a HP for heating we just have to assess the energy used by the compressor and auxiliaries of this HP system, this energy has for a great extend to come from renewable sources (onsite, nearby or the grid). The remaining non-renewable energy use has finally to be compensated elsewhere to meet the decarbonisation goals set by 2030 for new buildings. ■



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