

# Will the outcome of COP21 stimulate the EU member states to accelerate the building and HVAC sector towards a carbon-free build environment?



JAAP HOGELING  
Editor-in-Chief



United nations conference  
on climate change  
COP21/CMP11



COP21 has crossed many thresholds needed for the planning and implementation of global climate change actions. One of them is that it gave a clear message that from the technology point of view the smooth transition to near-zero emissions in buildings is feasible. A key message of the COP21 side events was to feature available solutions enabling the achievement of the ambitious zero emission targets. Another novelty of COP21 was that for the first time ever the energy sector – including among others buildings energy efficiency and construction sector – was involved in the UN climate discourse (see article on page 72). Experts and stakeholders agreed that the only way to force the market to invest in decarbonisation of buildings are prescriptive codes and mandatory energy performance (and/or CO<sub>2</sub> emission) requirements that are to be enforced.

The EU Energy Performance Buildings Directive requires the EU-MS's to enforce this. By 2020 for new buildings nZEB requirements will lead to more energy efficiency. New nZEB buildings or complete new settlements where smart building design and smart grid solution will be integrated. It will be a challenge for our industry and the innovative building and system designers to bend the “nearly” in our nZEB definition to really “zero” towards positive energy buildings where even the plug-loads are covered. This to reach complete de-carbonisation of the build environment. Regulators are not expected to go that far; they are still too much focused on the short term “cost-optimality” approach which sadly hampers accelerating innovation. Our

building and HVAC sector has to present the arguments to convince the long-term focussed investors and developers to take the lead.

HVAC, Energy and Building professionals have to be aware that these challenges require more training at all levels. Also a task for REHVA and the REHVA national member associations within Europe! Finally, we have to realise that the new building volume is just a very small fraction, in most EU counties less than 1%. Reaching a carbon-free build environment will require much more efforts towards deep-renovation. This to upgrade the existing building stock to the nZEB level. The resources needed for this could even exceed the efforts for new buildings. To quote Prof. Dr. Stefano P. Corgnati (REHVA President-elect) “Nevertheless, energy targets must be fixed with care. Energy consumption reduction from 250 kWh/m<sup>2</sup>y (typical of an existing building) to less than 30 kWh/m<sup>2</sup>y (towards nZEB), ensuring at the same time cost optimality, is a very ambitious goal in existing buildings. Moreover, it is not always feasible due to technological issues and real estate criticalities.”

This January 2016 issue focuses on “ventilative” cooling as an important approach to limit and prevent mechanical cooling in buildings. This technology needs special attention not only for new buildings but moreover for the existing building stock. By renovating and improving the thermal performance of existing buildings ventilative cooling can be a good solution to prevent overheating.

*A happy, healthy and successful year 2016 for all our REHVA Journal readers!*

*On behalf of REHVA board, staff and editorial board.*