



ARCHITECTS' COUNCIL OF EUROPE
CONSEIL DES ARCHITECTES D'EUROPE

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Architecture and Quality of Life

Environment and Sustainable Architecture: Closing the performance Gap

Political position

Final

At its meeting of 6 December 2013, the ACE General Assembly adopted this political position on Closing the Performance Gap.

TARGETS

Energy Efficiency Directive, Energy Performance of Buildings Directive, Construction 2020

BACKGROUND

Significant research effort is focused on highlighting and closing the gap between the expected and achieved energy performance improvements of buildings and the effectiveness of existing legislation and standards to achieve this. ACE champions the role of architects as integrators in low energy construction so that solutions put forward for low carbon refurbishment and new build are designed to balance the long-term needs of occupants and investors, and to contribute to urban regeneration.

ACE POSITION HIGHLIGHTS

- Advocate greater energy literacy for all built environment professionals.
- Advocate mandating feedback from buildings in operation.
- Support initiatives for transparent communication of such data across EU states so that investment in energy use measures is based on evidence of their effectiveness.
- Champion the mandating of 'disclosure' and benchmarking vs detailed procedural regulation.
- Champion case studies that demonstrate excellence.
- Promote/participate in EU-wide research projects that promote the above.

ACE POSITION – SHORT REPORT

Current EU energy legislation is not targeting reductions in measured energy use. Instead the current EPBD recast requires member states to develop complex calculation metrics that assess a building's energy consumption potential. To comply, built environment professionals only need to demonstrate that their proposed design can achieve improvements against a notional building under idealised operating circumstances. As compliance calculations are the only mandatory calculations required to assess energy performance, factors relating to construction quality, occupancy and management are routinely omitted.

Evidence shows that the impact of these factors is greatly underestimated and the lack of planning for measured energy use has significant unintended consequences. There is a growing tendency for more compact space allocation, smaller opening sizes and a greater mechanisation of buildings with greater reliance on complex control systems and low/zero carbon technologies. However assessing the impact of these on occupant comfort, building management and whole life costs is not required, often resulting in poorly integrated solutions. In practice these bring a much greater risk of increased

energy consumption, occupant discomfort, higher maintenance costs and a loss of productivity [see CarbonBuzz and UK Technology Strategy Board Building Performance Evaluation data].

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The approach to energy conversation advocated by current legislation and directives has resulted in a poor appreciation of the resilience of historic buildings, especially when we consider likely climate change impacts, in particular overheating. An integrated approach to low energy refurbishment and new build is required to create more resilient buildings – and architects are best placed to lead this. It is the traditional role of the architect to balance the complex factors of context, building fabric, technologies and occupants.

As feedback from buildings in operation is not mandated by regulation the effectiveness of investment in low carbon measures are not quantified and do not inform policy and procurement. Such data needs to underpin future legislation and investment in carbon and energy saving measures. Greater harmonisation of reporting metrics is required to allow the gathering of valuable statistical evidence from the refurbishment and construction of new buildings. Mandating the disclosure and benchmarking is necessary to incentivise collaborative working practices needed to achieve an EU building stock that requires significantly less energy in use and is resilient to the changing climate and demographics.

ACE CONTACT PERSONS

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ANNEXES

Other useful links: www.carbonbuzz.org, www.innovate.org.uk

Link to ACE website: www.ace-cae.eu