

## The Clean Energy Package of the European Commission – what's new in the revised EPBD?



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The European Commission unveiled on 30 November 2016 the long-awaited “Clean Energy for All Europeans” Package, which is an extensive set of policy measures and documents including the legislative proposal on the revised Energy Performance of Buildings Directive (EPBD), a binding 30% energy efficiency target, clarified Ecodesign framework and measures, policies to improve skills in the construction sector and smarter finance to help Europe grow while meeting its climate goals.

### Revised Energy Performance of Buildings Directive (EPBD)

The European Commission has proposed a revised Energy Performance of Buildings Directive (EPBD) and relevant articles of the Energy Efficiency Directive (EED). The proposal sets renovation targets, and minimum performance requirements for existing and new buildings. It furthermore adds provisions on energy performance certificates on inspections. A Staff Working Document linked to the proposal shows best practices of improved energy performance in buildings.

New elements of the legislative proposal:

- Incorporation of the provisions on **long-term renovation strategies** (Article 4 of the EED) in the EPBD
- Article 10 is updated to include two **new provisions on EPCs** to assess savings from renovations financed with public support are to be assessed by comparing EPCs **before and after renovation**
- Improved provisions on inspections of heating and air-conditioning systems (Articles 14, 15, 16), reinforcing the use of continuous electronic monitoring and building automation and control (BAC). Inspections of the H/C systems shall assess also the sizing compared to heating and cooling the requirements
- Annex I is updated to improve transparency and consistency of energy performance definitions at national or regional level and to take into account the importance of the indoor environment
- Commission is empowered to adopt delegated acts on “**smartness indicator**” (Article 23).

REHVA experts and TRC members have started to exchange opinions about the proposed changes and define key elements of a REHVA position.

### Indoor environment quality in the revised EPBD

REHVA has been advocating for minimum indoor environment quality (IEQ) requirements and for strengthening IEQ related aspects in EPBD during the whole review process. We can see some positive move in this direction in the published proposal. Annex I includes a binding requirement of ensuring minimum environment levels, without defining European level requirements though. It is left to the Member States to define them at national or regional level. To make sure that good IEQ is provided and maintained, there is a need to further strengthen IEQ in the EPBD. REHVA will further advocate for strengthening indoor environment and comforts aspects in the legislation, for instance that IEQ criteria should be part of the inspection of heating and cooling systems.

### Inspection, continuous monitoring of heating and air conditioning systems and BAC

It is certainly a good news that the articles 14-15 on the inspection of heating and of air conditioning system remained in the EPBD proposal, after they were deleted from the leaked version circulated in August 2016. Even though the previous requirements were not implemented by the countries, it is

important to have a scheme ensuring the proper operation and maintenance of the systems. Member States poorly implemented the original requirements partly because it was not clear how the outcomes should be enforced. The new articles contain binding requirements on setting up schemes that enforce regular inspection, including the assessment of system efficiency and sizing. However, the article focuses only on thermal energy and this should be widened to tackle measures for power load reduction and management.

Member States can choose requiring continuous monitoring and mandate the integration of building automation and control systems as an alternative to regular inspection. However, the requirements in the current proposal seem to be technically too complex, demanding at the same time the ability of:

- continuous monitoring, analysing and adjusting energy usage
- benchmarking, detecting of losses and informing the facility managers about energy saving opportunities
- communication with connected technical building systems and other appliances, and interoperability across the different types of systems and devices.

If the requirements are too complex, the risk that Member States won't implement the non-binding alternative measures is high. The requirements mix what can be implemented by a third-party service provider/inspector, by the building operator, or can be automated using BAC. For instance, benchmarking and the definition of energy saving opportunities can be an external service. The adjustment of the energy usage is mostly being done by the building and system operator. The requirement on connectivity and interoperability is not closely linked to inspection, goes beyond the scope of these articles.

To ensure cost effective inspection, instead of in-situ analysis, regular inspections can be carried out by analysing operational data provided by the BAC. However, the target values should be defined for individual components and systems, and measured



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appropriately. An important aspect is missing from the requirements: quality management must be ensured and the application of the BAC should be verified in a transparent way. This can be guaranteed by third party testing that is independent from owner, operator, or the BAC system itself.

### What is the smartness indicator?

The EPBD gives the mandate to develop a smartness indicator to assess the technological readiness of the building to adapt in response to the need of the occupants' demand, to interact with the grid and to facilitate maintenance and efficient operation. DG Energy has launched a service tender for the preparatory work, which is under contracting now. The technical specification of the tender describes the requirements that DG energy has in mind regarding the indicator. Beside the elaboration of a thorough market study and an impact assessment, the aim of the contract is to define and characterise a smartness indicator applicable for all building types and to develop a robust methodology for the calculation of such an indicator. The technical specification specifies to respect the EPBD, the related international and European standards. The impact assessment and the technical analysis should consider the wider benefits, including indoor environment and comfort aspects. At this stage, it is not clear yet how the characteristics and calculation methodology will consider IEQ requirements. REHVA will closely follow the process and provide inputs to the work of the consortium developing the indicator.

## Ecodesign Working Plan for 2016-2019

The Clean Energy Package contains also the new Ecodesign Working Plan for the 2016-2019 period defining new product groups including building automation and control systems, refrigerated containers, Solar panels and inverters and how Ecodesign will contribute to circular economy objectives.

Beside the new work plan the work is ongoing related to minimum energy efficiency requirements for air heating and cooling products and standardisation requests in support of Ecodesign measures for solid fuel boilers and local space heaters.

## Accelerating clean energy in buildings – construction initiative

The Commission reinforces its action to support the competitiveness of the construction sector and the benefits of the Energy Efficiency legislation by launching a construction initiative to accelerate the modernisation of the construction sector boosting growth and jobs. This initiative entails the speeding of the digitisation of the sector, the further upskilling of workers, a functioning internal market, and the development of the circular economy.

## Smart Finance for Smart Buildings Initiative

The initiative includes specific measures to further unlock private financing and enable market actors to realise their projects through attractive and appropriate financing solutions. This initiative can unlock an addi-

tional EUR 10 billion of public and private funds until 2020 for energy efficiency and renewables. The 3 pillars of the initiative are:


- More effective use of public funding
- Aggregation and assistance with project development
- De-risking investments

## Next steps

The European Parliament and the Council of the European Union will discuss and agree on equal terms with the proposal of the European Commission. REHVA is developing its position on the EC proposal and will closely follow the Parliament reading communicating its position to the policy makers. ■

## More information

- Communication from the Commission Ecodesign Working Plan 2016-2019, COM(2016) 773 final.
- Directive of the European Parliament and of the Council amending Directive 2010/31/EU on the energy performance of buildings, COM(2016) 765 final 2016/0381 (COD).
- European Commission - Fact Sheet: Putting energy efficiency first: consuming better, getting cleaner, 30 November 2016.
- Commission Staff Working Document: Good practice in energy efficiency, SWD(2016) 404 final.



## REHVA REPORT NO 6

### Building and HVAC system performance in practice

REHVA Workshops at CLIMA 2016, Aalborg, Denmark, 22-25 May 2016

The “CLIMA World Congress” series, that includes the REHVA workshops, provides a highly prestigious showcase of REHVA network activities undertaken in order to fulfil our mission. The 6<sup>th</sup> REHVA Report deals with the outcomes of the 25 technical workshops organised during our triennial flagship event, the CLIMA World Congress. The workshops held during CLIMA 2016 presented advanced technologies and tools, European projects and the work of the REHVA Task Forces which developed new Guidebooks.

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