



23 March 2021

# Recommendations for the Energy Performance of Buildings Directive revision



## Executive Summary

The revision of the Energy Performance of Buildings Directive<sup>1</sup> is a great opportunity to lay the foundations for deep, digital and future-ready renovations of the EU's buildings stock. The potential is obvious as buildings now contribute to about 40% of EU energy consumption and 36% to greenhouse gas emissions. DIGITALEUROPE welcomes the revision and recommends a new approach to put digital at the centre of the Directive.

- ▶ We recommend the Commission to pursue option 3 in the Inception Impact Assessment: **Amend the EPBD to translate the actions proposed in the Renovation Wave and the increased ambition towards building decarbonisation into legislation.**

Please read [here](#) our paper on the Renovation Wave (4 Dec 2020)

## Deep renovations are digital renovations

Digital is the central enabler for buildings to become more efficient while improving the living conditions throughout their lifecycle. Building Information Modeling and Digital Twins are critical technologies for the EU to comprehensively reach the goals as set out in the Renovation Wave. The revision of the Energy Performance in Buildings Directive (EPBD) is a great opportunity to reflect the new critical role of digital technologies. A future oriented EPBD has digital at its core. This includes making buildings more transparent to owners and users while at the same time realising ambitious efficiency targets and increasing indoor environmental quality.

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<sup>1</sup> EC (2021) [Energy efficiency – Revision of the Energy Performance of Buildings Directive](#)

- ▶▶ **Minimum energy performance standards:** The revision of the EPBD should set minimum energy performance standards (MEPS), that should reflect a sophisticated strategy for achieving long-term CO<sub>2</sub> emissions reductions – beyond building envelope<sup>2</sup> renovations only – **powered by interconnected technologies** including reporting and direct feedback to building users. To achieve this, in addition to energy performance the MEPS should set up long-term CO<sub>2</sub> emissions reductions milestones. Therefore, milestones must go hand in hand with the adoption of metrics that must be upgraded in time of property transaction or renovation. Those metrics shall act as ‘trigger points’ and must be adjusted to the respective type of buildings. The metrics must go beyond energy efficiency, looking at among others; the systemic efficiency impact per technology in order to achieve economy of scale and promote energy efficiency / renewable energy integration, the active role of buildings in the energy system (demand-side flexibility), and indoor environmental quality.
- ▶▶ **Net-zero by 2050:** Buildings must be net-zero carbon neutral by 2050, with intermediate milestones, meaning they are zero-carbon throughout their entire lifecycle. This shall trigger a revolution in the building industry, which needs to **rethink buildings for optimal performance**.
- ▶▶ **New energy performance certificates:** a certain number of key indicators must be fully harmonised across Europe. In particular, the indication of the building performance in CO<sub>2</sub> emissions/final energy so to enable a better engagement by end-users<sup>3</sup>. The Energy Performance Certificate (EPC) must take into account a wider range of parameters to estimate the actual energy performance of a building, in particular management, control and monitoring mechanisms. Finally, the reform of the energy performance certificate should promote a data-model approach in reference points about their level of performance.
- ▶▶ **Increase the pressure – measure – support:** The Renovation Wave initiative already defines some important principles, but to reach its ambitious goals the Commission should increase the pressure. This can include:

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<sup>2</sup> A building envelope is the physical separator between the conditioned and unconditioned environment of a building including the resistance to air, water, heat, light, and noise transfer.

<sup>3</sup> The French EPC (so-called “Diagnostic de Performance Energétique”) will evolve in July 2020 and will no longer be expressed in primary energy consumption only (calculated in kWh/m<sup>2</sup>/year) but also in greenhouse gas emissions (expressed in CO<sub>2</sub> kg/m<sup>2</sup>/year).

- **Mandatory CO2 reduction targets for the building stock** targeting the building stock with the higher-level long-run renovation potential first (non-residential buildings must be early mover because of their innovation/cost saving potential).
  - In cooperation with industry, develop methodologies and indicators to **measure the potential of digital**, thereby delivering trust and accelerating the use of these technologies.
  - **Support the deployment of critical technologies** to accelerate decarbonisation, digitisation & electrification: e.g. Building Automation and Control/ Building Management System (BACS/ BEMS), smart heat pump, solar panel, battery storage.
- ▶▶ **Digital to align the tools:** This requires a **data-model approach** to the building's energy performance. DIGITALEUROPE supports the plans as set out in the Renovation Wave for the integration of Energy Performance Certificates, Smart Readiness Indicators (SRIs) and Renovation Passports in the Digital Building Logbooks. Digital should play a key role in aligning the various tools.
- ▶▶ **Global standards:** Already available data from the Building Management System and the IoT data (sensors and actuators) need to be documented in the relevant agreed standards. Here are some important principles for determining a common set of protocols, standards and models:
- A link between the many existing databases to build machine-readable, unique relations. We do not need a new monster database by copying data to hold it twice.
  - A globally valid solution. The EU can and should take a pioneering position in adopting rules for the handling of data (rights/ duties) in the different phases.
- ▶▶ **Secured investments in digital buildings:** DIGITALEUROPE welcomes the initiative to mark digital buildings projects under the 'renovate' flagship, and encourages pressure on building-related aspects of each EU country's national plans for buildings renovations.<sup>4</sup>

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<sup>4</sup> [Long-term building renovation strategy](#) (LTRS), [national energy and climate plans](#) (NECP) and aspects of the EPDB

- ▶▶ **A roadmap for digital technologies in buildings:** This should support or mandate the roll-out of digital design and operating tools with BIM in digital construction work and renovation work. The roadmap should promote digitisation of license permits in the EU and identify other digital tools providing added value in terms of circularity, efficiency and flexibility. The Renovation Wave initiative already defines some important principles, but to reach its ambitious goals the Commission should increase the pressure.
- ▶▶ **Promote Digital Twins and Building Information Modeling:** Digital solutions based on ecosystems of Digital Building Twins will prove key to reaching the green goals efficiently. Therefore, the EPBD should be complemented by promoting Building Information Modelling (BIM) in public procurement by basing public procurement on the MEAT.<sup>5</sup>

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<sup>5</sup> Most Economically Advantageous Tender

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## About DIGITALEUROPE

DIGITALEUROPE represents the digital technology industry in Europe. Our members include some of the world's largest IT, telecoms and consumer electronics companies and national associations from every part of Europe. DIGITALEUROPE wants European businesses and citizens to benefit fully from digital technologies and for Europe to grow, attract and sustain the world's best digital technology companies. DIGITALEUROPE ensures industry participation in the development and implementation of EU policies.

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