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EPBD IMPLEMENTATION REPORTS

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THE BPIE LIBRARY OF EPBD IMPLEMENTATION REPORTS

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The Energy Performance of Buildings Directive (EU/2024/1275) is a key law aimed at making the European built environment future-proof, sustainable and decarbonised. The recast Directive's deadline for national transposition is 29 May 2026. To support Member States' national authorities in the transposition and implementation of the EPBD, either as a whole, or focusing on specific provisions, this paper compiles BPIE's key publications related to the EPBD.

The library includes:

- Relevant publications with a short description and a link to the source.
- An indication if the publication covers practices from a specific Member State.
- An indication if the publication includes specific good practice examples.

THE BIGGER PICTURE: PUBLICATIONS ABOUT MULTIPLE ASPECTS OF THE EPBD

Delivering the EPBD: A guide towards better, affordable and more resilient buildings for all in Europe, May 2025

A detailed guide aiming to serve as a practical roadmap with actionable steps, providing clarity on legal provisions and outlining effective policy measures. It presents recommendations, good practices, and additional resources.

The guide consists of 4 chapters corresponding to the following EPBD provisions:

- Planning tools to achieve the 2050 vision for the built environment: national building renovation plans (Art. 3, Annex II),
- Policies to improve the renovation of existing buildings: minimum energy performance standards for non-residential buildings and national trajectories for the progressive renovation of the residential stock (Art. 9),
- An updated standard for construction and the progressive integration of lifecycle thinking: zero-emission buildings, life-cycle global warming potential (Art. 2, 6, 7, 10,11, Annex I, II),
- A strong information, advisory and financial supportive framework: energy performance certificates, renovation passports, one-stop shops and financial support (Art. 2, 12, 17, 18, 19, 20, 21, Annex V, VI, VIII).

The guide also includes social fairness considerations throughout its analysis and provides an in-depth exploration of five overarching topics: public buildings as leaders in renovation, buildings contributing to flexible energy grids, climate resilience and future-proof investments, aligning cost-optimality with social benefits, as well as indoor air quality and health.

- Includes 60 good practices across numerous Member States.
- 80 recommendation boxes for better implementation.

Mapping Policy Needs for Effective 2024 EPBD Implementation, Dec 2024

The report serves as a detailed mapping of the national policy needs for effective EPBD implementation in the EPBD.wise project focus countries. The report highlights cross-cutting policy needs, presents evidence-based insights, and gives tailored solutions and recommendations.

The report focuses on key areas:

- National building renovation plans (Art. 3),
- Zero-emission buildings (Art. 11),
- Minimum energy performance standards and national trajectories (Art. 9),
- Renovation passports (Art. 12),
- Energy performance certificates (Art. 19).

Focus countries: Bulgaria, Greece, Hungary, Poland, Romania and Ukraine, replicable in other Member States.

Reports on policy needs and best practices can be found on the **webpage** for each of the policy areas.

Wärmewende in Europa. Gute Praxis aus ausgewählten Ländern & Empfehlungen für Deutschland (Energy transition in Europe: Best practices from selected countries & recommendations for Germany), Nov 2024

Available only in German.

The report features good practices on implementing buildings' energy transition and gives specific recommendations for Germany. It can support Member States in the implementation of provisions related to the transformation of the worst-performing buildings (Art. 9), building stock data (Art. 22), energy performance certificates (Art. 19), participatory processes (Art. 3), one-stop shops (Art. 18), and workforce upskilling (Art. 17).

Tailored recommendations for Germany and good practices relevant for other Member States.

Includes policy options and implementation practices across numerous Member States.

IN FOCUS: PUBLICATIONS ON SPECIFIC EPBD ARTICLES

ARTICLE 3 – NATIONAL BUILDING RENOVATION PLAN (NBRPs)

Sufficiency in the Building Sector for the Whole Life Carbon Roadmap, Jan 2025

The report introduces the concept of sufficiency in the buildings sector, exploring, amongst other benefits, its potential to reduce greenhouse gas emissions. It includes examples of sufficiency initiatives across Europe. The report can help Member States draft national building renovation plans (Art. 3), specifically supporting the inclusion of sufficiency measures within the NBRP template (Annex II).

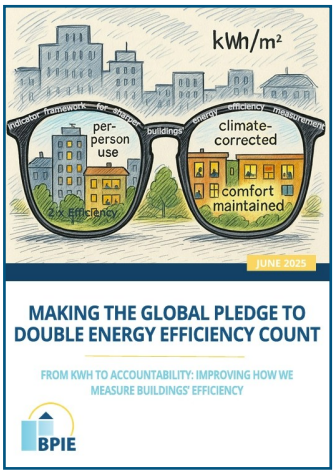
5 case studies on real-world sufficiency measures in Belgium, France, Germany, Ireland and Poland.

Sufficiency in the National Building Renovation Plans: Recommendations for Member States, Jan 2026

The report clarifies the concept of sufficiency and formulates effective sufficiency measures within the scope of national building renovation plans (Art. 3) and their template (Annex II). It offers specific policy measures to embed sufficiency, showcasing real-world examples. It includes issues such as prioritisation of the existing building stock in public procurement, gathering data about vacancies, and implementation of tax measures for conversion and renovation. The measures suggested can help Member States with EPBD implementation and address housing affordability.

Real-life policy examples across Europe for each policy strategy.

Making the Global Pledge to Double Energy Efficiency Count, Jun 2025



The report explores a methodology for measuring progress towards energy efficiency in the building stock. It outlines 6 steps towards a quantitative analysis of energy efficiency: energy consumption in households, climate-corrected future energy consumption in households, floor area, energy intensity, per capita energy consumption, and thermal comfort.

This methodology is relevant for the roadmap which features nationally established targets and measurable progress indicators in the NBRP (Art. 3 §2b), for minimum energy performance standards for non-residential buildings, and for national trajectories for the renovation of the residential building stock (Art. 9 §1-2).

EU Buildings Climate Tracker 3rd edition, Nov 2024

The report shows the EU's progress towards 2030 and 2050 climate goals. It uses a progress index based on 4 indicators relating to building climate neutrality: CO_2 emissions from energy use in buildings for households and services, final energy consumption in households and services, renewable energy share, and cumulative investment in renovation.

The EU Buildings Climate Tracker can be used as an example for Member States on what indicators to look at while tracking their own progress towards achieving decarbonisation (Art. 3), based on indicators that relate to several EPBD provisions (e.g. final energy consumption indicators related to Art. 9, minimum energy performance standards and national trajectories).

Italy Buildings Climate Tracker: Is Italy on track to decarbonise its building stock?, Mar 2025

The report includes a specific analysis of the Italian building stock's pathway towards achieving climate goals, following the structure and the 4 indicators of the EU Buildings Climate Tracker methodology.

Italy's BCT report shows an in-depth view of a specific Member State, which can be replicated by others.

Healthy Buildings Barometer 2024: How to deliver healthy, sustainable, and resilient buildings for people, Apr 2024

The report guides policymakers and stakeholders towards achieving healthy and sustainable buildings. It establishes a comprehensive framework for healthy buildings based on scientific research, through 5 dimensions of healthy buildings (mental and physical health, human needs, sustainability, resilience and adaptation, empowerment of people).

It serves as a guide to the wider benefits that better buildings can bring. It can assist policymakers in fulfilling requirements of the NBRPs to include an evidence-based estimate of wider benefits (Art. 3 §2h), and to support improvement of buildings' indoor environmental quality (included in Art.. 5, Art. 7, Art. 8, Art. 13).

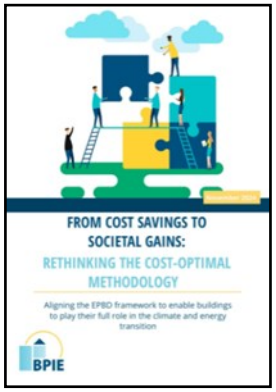
Applicable to all EU countries, includes examples from Denmark, France, Germany, the Neth erlands, Slovakia, Spain and Sweden.

Evidence based on 12 real-life case studies, with 7 featured in the report.

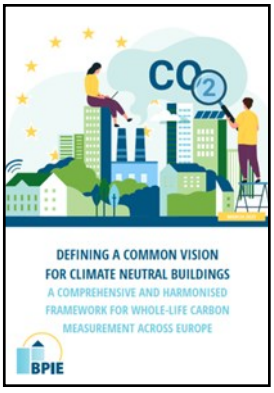
ARTICLE 6 – CALCULATION OF COST-OPTIMAL LEVELS OF MINIMUM ENERGY PERFORMANCE REQUIREMENTS

From Cost Savings to Societal Gains: Rethinking the cost-optimal methodology, Nov 2024

The report examines how to improve the calculation of cost-optimal levels of minimum energy performance requirements for buildings (Art. 6) by incorporating the multiple benefits of energy-efficient buildings. It offers specific recommendations for the Commission and Member States on integrating additional benefits into future cost-optimal calculations: improved energy security, increased productivity, alleviating energy poverty and benefits for the energy grid. Additionally, the report discusses the role of discount rates and energy price developments in determining cost-optimal levels.



ARTICLE 7 – NEW BUILDINGS



Defining a Common Vision for Climate Neutral Buildings: A comprehensive and harmonised framework for whole-life carbon measurement, Mar 2025

The report supports the establishment of the EU-wide methodology for calculating the life-cycle global warming potential of buildings and provides key principles for consideration for the European Commission and Member States. The report analyses the main methodological challenges and their implications concerning the dynamics of operational and embodied carbon, renovation vs. new build, and data and skills requirements.

Includes an overview of whole-life carbon regulations and initiatives across numerous Europe an countries

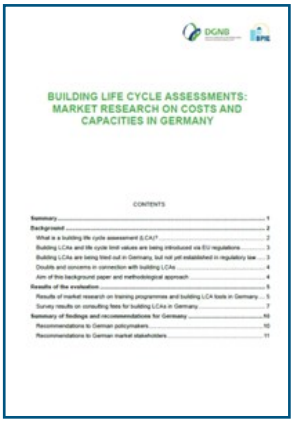
Life cycle-based Assessment of Buildings. An analysis of 28 residential buildings with regard to climate impact and costs in Germany, Sep 2025

The report examines the cost implications of implementing life-cycle carbon assessments based on the analysis of 28 new residential buildings, and provides evidence on costs and opportunities associated with whole life carbon. It highlights that optimising buildings for life-cycle carbon performance does not necessarily increase construction cost. It also demonstrates the importance of material choices and design decisions in reducing the whole-life carbon footprint of buildings and meeting future regulatory requirements. The report includes recommendations for policymakers and market actors in Germany to prepare them for the implementation of the life cycle provisions (Art. 7 §2, §3, §5).

Focus on Germany, with findings replicable across the EU.

Evidence based on the analysis of 28 new buildings.

Relevance and Costs of a Life Cycle Perspective on Buildings: Market data on life cycle assessment in Germany, Sep 2025



The report analyses the current market for building life cycle assessment (LCA), including costs, required expertise, and the availability of calculation tools and methods. It looks into what aspects affect the cost of LCA, such as data collection efforts and building size, and how to improve the process while reducing the cost through the use of BIM and simplified standard procedures. The report includes recommendations for policymakers and market actors in Germany to support capacity building ahead of the implementation of the life-cycle provisions (Art. 7 §2, §3, §5).

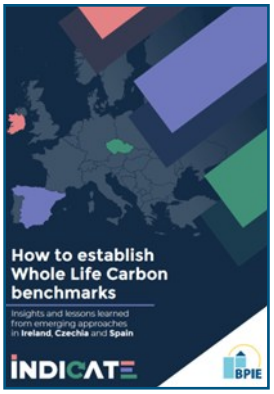
Focus on Germany, with findings replicable across the EU.

Environmental Product Declarations for Construction Products: An overview of availability, costs, and trends in Germany, Jan 2025

The report offers market insights into Environmental Product Declarations (EPDs), a key data source for whole-life carbon assessments (Art. 7§2). It summarises the current availability of data, cost drivers, and organisational challenges in Germany, alongside the trend of rising demand, evolving expertise, and highlights remaining gaps. The report's recommendations support policymakers and market actors in preparing for alignment with the EPBD through scaling up life cycle assessments in buildings.

Focus on Germany, with findings replicable for the entire EU.

How to establish Whole Life Carbon benchmarks: Insights and lessons learned from emerging approaches in Ireland, Czechia and Spain, Oct 2024



The report documents how Ireland, Czechia and Spain have developed GWP assessment methodologies, baseline data and initial benchmarks for the forthcoming whole life carbon reporting and limit value requirements. It highlights common challenges and opportunities, including data needs and stakeholder engagement, present in the early stages of WLC framework development. The report shares templates and specific lessons for setting progressive benchmarks for reliable and comparable WLC frameworks across Member States (Art. 7§2,5).

Country analysis of Ireland, Czechia and Spain, mentioning practices from other countries, and replicable across the EU.

ARTICLE 7 – NEW BUILDINGS & ARTICLE 8 – EXISTING BUILDINGS

Integrating Seismic Safety and Energy Efficiency: A holistic approach to renovation putting people first, Feb 2025

The report offers insight into how the EPBD can be used to develop an integrated approach to renovations, improving both seismic safety and energy efficiency. It also addresses ways in which policymakers and citizens can co-design renovation programmes and policies.

The report offers recommendations to Member States to align the requirements of buildings undergoing major renovation with the issues of risks related to seismic activity (Art. 8 §3). Moreover, it gives some advice for integrating seismic risk thinking within one-stop shops (Art. 18), minimum energy performance standards and national trajectories (Art. 9).

Featured findings from a pilot in Catania, Italy.

ARTICLE 9 – MINIMUM ENERGY PERFORMANCE STANDARDS (NON-RESIDENTIAL BUILDINGS) & TRAJECTORIES FOR PROGRESSIVE RENOVATION OF RESIDENTIAL BUILDINGS

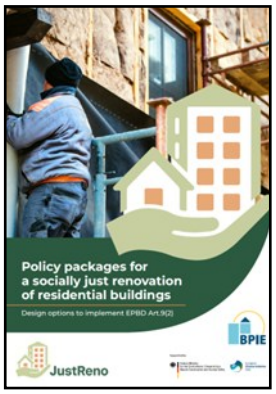
Upscaling Innovation in Renovation: A call for a strategic approach for a competitive and sustainable construction sector, Jun 2025

The report explores innovative solutions for building renovations and highlights how the implementation of the EPBD can help boost innovation and productivity in renovation. These solutions offer benefits to companies, building owners and the environment, driving up the economic growth and increasing productivity in the sector. The report describes five key areas of innovation in renovation, identifies barriers and good practices, and gives policy recommendations. The report recommends that Member States follow a strategic approach based on three main pillars: create markets for innovation in renovation through targeted requirements (Art. 3, Art. 9), transform the value chain (Art. 3, Art. 17, Art. 22), and develop effective finance solutions for innovation (Art. 17). The report also provides recommendations beyond implementation of the EPBD. It stresses the importance of stable and binding long-term targets, on the one hand, and enabling policies, including the reduction of implementation barriers (e.g. through better public procurement), on the other.

Analysis of France, Germany and Spain for specific barriers and solutions, highlighting specific good policy practices.

Making Choices for Home Renovation: A guide for an effective implementation of EPBD Article 9.2, Jun 2025

The report is a practical guide for Member States to implement renovation trajectories for residential buildings (Art. 9 §2). At the core of the implementation approach defined by this report is the segmentation and energy performance assessment of the building stock for targeted, tailored and effective policies. It offers multiple recommendations, such as strengthening national data infrastructure, developing flexible and well-informed renovation scenarios, carefully considering the worst-performing buildings, and integrating the role of different stakeholders in national trajectories.



Policy Packages for a Socially Just Renovation of Residential Buildings, Dec 2025

The report explores the implementation of national trajectories for residential buildings (Art. 9§2) through policy packages designed to address the worst-performing buildings and protect vulnerable households while addressing the following: building stock characteristics, socio-economic conditions, and the existing policy and governance framework. The report offers examples of policy packages to renovate residential buildings, taking into account replicability, upscaling, governance, affordability, and building stock segmentation.

Specific recommendations for Hungary, Poland and Romania. General policy package suggestions for different conditions.

Multiple examples from different countries, including Germany, Belgium and Hungary.

ARTICLE 12 – RENOVATION PASSPORTS

Accelerating Deep Renovation in the EU with Renovation Passports, Sep 2024

The report provides a roadmap to guide national policymakers towards optimal implementation of the renovation passports requirements (Art. 12), offering concrete policy actions from preparing the ground for transposition to rollout of the passports. The report is based on the renovation passports model developed under the iBRoad2EPC project, which offers a flexible, modular template tool that meets the technical requirements of the EPBD (Annex VIII) linked to energy performance certificates, supporting staged deep renovations.

Based on the iBRoad2EPC tool pilots in Bulgaria, Greece, Poland, Portugal, Romania and Spain.

Enhancing Incentives through iBRoad2EPC: How to best use financial and non-financial incentives for renovation in implementing markets, Aug 2024

The report examines how the renovation passport (Art. 12) implementation approach, developed by the iBRoad2EPC project, can be integrated with financial (Art. 17) and non-financial incentive programmes for renovation. It starts by individually assessing the role of EPCs in various current financial and non-financial incentive programmes for building renovation and their alignment with the past long-term renovation strategies. The report identifies opportunities and provides recommendations on how to increase the effectiveness of national incentive programmes through the iBRoad2EPC concept.

Deep analysis of the iBRoad2EPC tool pilots in Bulgaria, Greece, Poland, Portugal, Romania and Spain, that can be replicated in other Member States.

Enabling Local Authorities to Lead the Decarbonisation of Buildings: Challenges and opportunities of building renovation passports in Central and Eastern Europe, Apr 2024

This report provides the renovation passport guidebook for local authorities, presenting renovation passport design features and success factors, highlighting relevant challenges for national and local authorities, and providing recommendations for local authorities to start working with passports. It aims to support local authorities in view of administrative, funding and technical capacity challenges.

Specific recommendations for local authorities in Bulgaria, Romania and Slovakia, that can be applied to other countries.

Features renovation passport scheme examples from Germany, Denmark, France, and Belgium.

ARTICLE 17 – FINANCIAL INCENTIVES, SKILLS AND MARKET BARRIERS

Enabling Finance for Positive Energy Neighbourhoods, Sep 2025

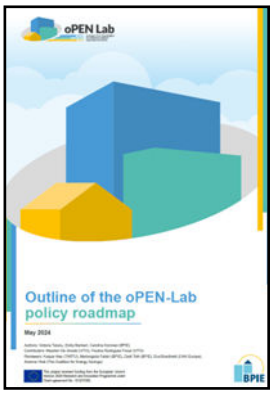
The white paper explores financing solutions for positive energy neighbourhood (PEN) renovations as a holistic solution, combining energy efficiency, renewable energy generation, and social inclusion. It examines the need to reduce reliance on public funding and actively leverage private finance, ensuring broader and more sustainable investments. The report shows barriers and financing solutions that account for broader social and environmental co-benefits of PEN renovations, and a funding model design that includes vulnerable households (Art. 17§18). The report can help Member States in the effective implementation of financial incentives towards integrated district renovation programmes, enabling their numerous benefits (Art. 17§16).

Showcases two positive energy neighbourhood case studies from Belgium and Austria.

Multiple Benefits of Sustainable Plus Energy Neighbourhoods and their Potential Impact on Policy and Investment Decisions, May 2024

The report reviews various concepts related to the multiple benefits of a group of positive energy buildings on a neighbourhood scale, identifying co-benefits that can be quantified and monetised. It provides a methodology to quantify positive energy neighbourhoods' co-benefits into investment and policy decisions, which unlocks ESG financing for sustainable new developments and renovations (Art. 17§16).

Outline of the oPEN-Lab Policy Roadmap, May 2024

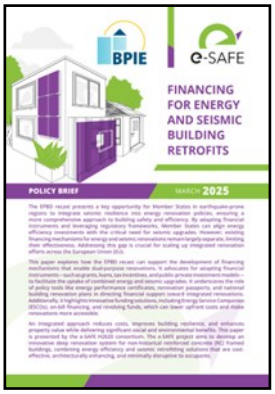


The report presents an analysis of key EU policies (EPBD, REDIII, EED) relevant for underpinning the positive neighbourhood approach to building renovations. It highlights certain aspects such as definition alignment, tailored financing, and coherent implementation of the directives to implement sufficiency and neighbourhood approaches.

Mainstreaming the Neighbourhood Approach into EU Building Policies, Apr 2025

The report focuses on Sustainable Plus Energy Neighbourhoods, mapping the developing policy landscape at the EU level (EPBD, REDIII, EED, and the EU taxonomy) relevant for both new and renovated buildings. It provides recommendations to guide policymakers in the implementation of these directives at the national and local levels to enable neighbourhood solutions and ambitious sustainable projects going beyond 'business as usual'.

Integrating Seismic Safety and Energy Efficiency: An economic pathway for resilient buildings, Mar 2025



The report presents the integration of seismic safety (Art. 7§6, 8§3) into the financial energy renovation frameworks (Art. 17) by leveraging financial solutions such as on-bill financing, revolving funds, recurring funds, public-private partnerships and more for the purpose of seismic resilience. The report includes an overview of key design options for financing tools. Moreover, the report includes an overview of various EPBD provisions that can integrate seismic resilience considerations.

Offers specific recommendations for earthquake-prone Member States.

ARTICLE 18 – ONE-STOP-SHOPS FOR ENERGY PERFORMANCE OF BUILDINGS

EU and National Level Policies Related to Renovation and Alleviating Energy Poverty, Apr 2025

The report focuses on the assessment of EU policies that directly promote the alleviation of energy poverty (in accordance with several provisions: Art. 3§2b, Art. 9§4a, Art. 17§18) and renovation of multi-family apartment buildings to support the most vulnerable. The paper examines the related policy framework of the EU and its national implementation in three partner countries for recognition of resource centres, or one-stop shops (Art. 18), where residents can access comprehensive information, technical assistance and financial support for energy-efficient home renovations; as well as Neighbourhood Energy Sufficiency Roadmaps (related to EED Art. 25). The report offers key priorities and recommendations for EU, national and local policy framework changes.

Specific analysis and recommendations for national policymakers in Bulgaria, Hungary, and Lithuania.

Features good practices from three focus countries.

ARTICLE 22 – DATABASES FOR THE ENERGY PERFORMANCE OF BUILDINGS

A Vision for Data in the Built Environment: Transforming sustainability reporting, Mar 2025

The report highlights the role of digital building logbooks (Art. 22§7) as a key enabler of seamless data exchange across the real estate value chain. The report provides recommendations for policymakers, financial institutions, and industry leaders to work together to establish a transparent, efficient, and future-proof data ecosystem for the built environment. These recommendations include: development of a common EU data dictionary for standardisation and simplification, a federated data model, information alignment, and preparing for growing data demands. Additionally, it suggests expanding their use beyond energy performance (Art. 16§1) to align with broader policy objectives, such as climate neutrality, circularity, and green finance.

Digital Building Logbooks: A state of play, Oct 2024

The report explains what digital building logbooks (Art. 22§7) are and how they can contribute to a wide range of societal goals, from climate and environment, to public health, innovation and more. Written with the European Commission in mind, the report can also be used by Member States in implementing digital building logbooks through a focus on relevant policy objectives and integration of relevant indicators in digital building logbooks, such as energy performance, smart readiness, and life-cycle assessment.

Aufbau einer Datenbank über die Gesamtenergieeffizienz von Gebäuden in Deutschland. Von EU-Nachbarn für eine Umsetzung lernen, Jan 2025

Available only in German.

The report describes building stock database policy requirements (Art. 22) and provides practical insights and experiences across the EU to develop an effective energy performance of buildings database. It presents examples relating to data transparency, cooperation of various stakeholders in data provision and database development, as well as the integration of different databases. The report gives specific recommendations for German policymakers.

Recommendations focus on Germany, replicable to other Member States.

Features good practices from across the EU.