REDESIGN

Guiding framework for the introduction of Minimum Energy Performance Standards for the Worst Performing Public Buildings

SUPPORTED BY:

Federal Ministry for Economic Affairs and Climate Action

on the basis of a decision by the German Bundestag

European Climate Initiative EUKI

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EXECUTIVE SUMMARY

With the existing national renovation policies falling short of generating and supporting enough activity to bolster the needed depth and pace of renovations, boosting the sector with more powerful and efficient policy measures in the revised Energy Performance of Buildings Directive (EPBD) offers a promising pathway not only to place EU on track for decarbonisation, but also to unlock significant economic and social benefits.

Among the measures expected to exert such an impact are the minimum energy performance standards (MEPS). They apply to both residential and non-residential buildings to achieve a minimum performance threshold, defined by Member States and expressed in terms of a carbon or energy rating or minimum renovation measures. This is to be established by a specific compliance deadline or at a certain moment in the life of a building. Yet, absent a coherent and consistent approach, the design and enforcement of MEPS risk becoming fragmented, leading to uneven implementation, compliance gaps, and missed opportunities.

This guiding framework sets out the core components for effective MEPS design and implementation at the national level, with a focus on public buildings: feasibility and country readiness assessments, design principles, implementation, monitoring, and evaluation. These components are structured based on a roadmap that charts the steps and timelines from initial design to full implementation.

The following are key considerations for designing and implementing MEPS in public buildings, according to the implementation phase:

- Gathering reliable building stock data to identify the worst-performing public buildings
- Evaluating administrative, technical, and financial capacities at the local level
- Setting performance thresholds by building type, use, and climate zone
- Embedding MEPS in a supportive policy ecosystem in terms of financial support, technical assistance, digital monitoring tools, and early engagement of local authorities to encourage MEPS multi-level governance
- Assigning clear roles and responsibilities and ensuring enabling conditions in each phase
- Establishing accountability systems: compliance protocols, independent verification, and transparent non-compliance measures
- Tracking performance through EPC registries or renovation passports
- Monitoring post-renovation energy performance against preset thresholds
- Evaluating the MEPS policy impact: energy savings, cost-effectiveness, social benefits
- Reviewing and refining: adjusting thresholds, timelines, and support mechanisms based on lessons learned

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INTRODUCTION

Renovating the European building stock has fallen short of expectations, drawn back by persistent inefficiencies and marked regional disparities. Chief among these, particularly in Central and Eastern Europe (CEE), have been structural market failures (low renovation rates and insufficient data on the building stock characteristics and energy performance) stemming from limited information on the financial aspects of renovation measures and scarcity of attractive financing products. Likewise, national regulatory shortcomings and weak enforcement mechanisms have resulted in gaps in the implementation of EPBD, to the effect that compliance has been inconsistent across Member States. Taken together, these deficiencies have casted doubt on the EU's capacity to achieve the renovations' scale and pace in order for the building sector to make its full decarbonisation contribution.

Following a three-year period of negotiations, the recast Energy Performance of Buildings Directive (EPBD), adopted in 2024, places the building sector on a more ambitious, albeit challenging, route towards full decarbonisation by 2050. In driving the scale and speed of change required for renovations, minimum energy performance standards (MEPS) stand out as one of the most highly promising and transformative policy instruments (Sunderland & Santini, 2020) (EC, 2016). MEPS are expected not only to tackle long-standing inefficiencies and enhance the effectiveness of existing renovation programmes, but also to deliver greater benefits than many other measures when embedded in a comprehensive renovation framework. Beyond supporting renovations, MEPS are also expected to deliver broader social and economic benefits.

In targeting the worst-performing buildings, where the potential for emissions reduction is greatest, MEPS can significantly accelerate renovation rates: they stimulate demand in the renovation market, encourage investment across the value chain, and create favourable conditions for innovation (BPIE, 2025). Evidence from countries that have already adopted such standards, including the United Kingdom, the Netherlands, and France illustrates their ability to unlock production capacity, foster workforce training, and enhance industrial competitiveness.

The EPBD requires Member States to apply MEPS to the worst-performing 16% of their public building stock, while granting flexibility in defining this segment through national classification systems or equivalent methods. Standards must be phased in through a stepwise approach with clear timelines for compliance. The key to securing tangible results for Europe's citizens and businesses lies in prompt and consistent implementation of MEPS, supported by stable policy frameworks and well-designed support schemes that strengthen and expand the current renovation frameworks.

The following guidelines set out the key elements of MEPS and the stages of policy making, from feasibility and country readiness assessments, formulation and design through to implementation, monitoring, and evaluation. They are structured around a practical roadmap that charts the steps needed to move from initial preparation to full implementation. At each phase, the guidelines offer recommendations and approaches that can be productive particularly for CEE countries in their MEPS development. In addition, the guidelines emphasise stakeholder engagement, capacity development, and iterative policy design. While the policy processes of introducing MEPS will necessarily reflect the national contexts, this paper provides a guiding framework informed by research and good practices to support policymakers in the implementation of MEPS.

1. Understanding MEPS

MEPS are introduced in Article 9 of recast EPBD as a regulatory requirement for Member States to improve the worst-performing segment of their national building stock. Article 2(20) defines MEPS as "rules that require existing buildings to meet at least a minimum energy performance level by a specified date, in a stepwise manner." This entails specifying which buildings are included, how their energy performance is evaluated, and setting the rules and circumstances under which exemptions from these standards are to be applied at national level. (EC, 2024)

Scope of MEPS: where and how they apply

The introduction of MEPS reflects the need to target the least efficient buildings. The directive sets a minimum scope of application: Member States must ensure that, at a minimum, the 16% worst-performing part of their building stock is covered. This segment may be identified using national energy performance certificate (EPC) classes or other verifiable methods established at national level. The definition must be based on consistent and transparent criteria. EPBD prioritises non-residential buildings for early implementation and explicitly requires that public and occupied non-residential buildings be subject to MEPS earlier than the general stock. This sequencing reflects the exemplary role of public authorities and the need to lead the renovation effort through publicly visible assets.

Member States are required firstly to identify the 16% and 26% worst-performing parts of the public building stock to be prioritised and renovated by 2030 and 2033, respectively. Compliance with MEPS by individual buildings is to be verified by checking EPCs or other means defined by Member States. Further percentage segments of the non-residential stock, identified against the 2020 baseline, would need to be renovated by 2040 and 2050. The calculation of these additional segments should factor in the target that the entire building stock should meet Zero-Emission Buildings (ZEB) standards by 2050.

While MEPS are mandatory, Member States can decide how they are designed and supported, including setting performance thresholds, establishing monitoring systems, and offering technical or financial assistance.

Defining MEPS for residential and non-residential buildings

Absent a common EU definition, non-residential buildings include all buildings used for purposes other than residential, whether public or private. Mixed-use buildings should be treated in a way that avoids double counting, with improvements clearly attributed to the residential or non-residential portion of the building. Worst-performing non-residential buildings are identified according to national thresholds of energy performance, allowing flexibility in accounting for building type, use, size, typology, and climate zone.

Choosing appropriate energy performance indicators for MEPS

In defining MEPS, Member States may select either final energy use or primary energy use as the indicator for setting thresholds, as well as other indicators, such as CO_2 emissions factor. Final energy use reflects the building's theoretical energy demand and encourages efficiency measures, such as upgrading envelopes or heating systems. Primary energy use accounts for energy before conversion, capturing both efficiency improvements and the use of renewable sources, while enabling comparison across energy carriers. The choice of indicator directly influences the types of measures required to meet MEPS obligations.

Exemptions

Exemptions may apply to buildings with special historical or architectural significance, even if they are not formally protected, as well as to religious buildings, temporary structures, and those with a floor area below 40m^2. Additional considerations for exemptions apply where the energy renovation of a building is considered economically unfavourable. Member States are expected to develop national guidelines, aligned with forthcoming EU

guidance, to ensure that these exemptions do not undermine the broader policy objectives. Accordingly, there are additional safeguards to maintain the original ambition of the standards provisions: avoiding a “disproportionate number” of non-residential buildings; ensuring equal treatment between non-residential buildings; and ensure comparable energy performance improvements elsewhere in the non-residential stock to offset buildings that are exempted. (EC, 2024).

2. Country readiness for the implementation of MEPS in public buildings

Introducing Minimum Energy Performance Standards (MEPS) for the worst-performing public buildings requires a comprehensive understanding of each country’s capacity to design, adopt, and enforce such measures. Country readiness reflects not only the technical potential for renovation but also the broader policy, institutional, financial, and stakeholder ecosystem that enables successful implementation.

This chapter provides a structured assessment of the key enabling conditions that underpin MEPS introduction:

- **National policy and legislative framework** – evaluating how existing laws, regulations, and strategic plans support or constrain the adoption of mandatory performance standards for public buildings.
- **Data collection** – analysing the quality, availability, and accessibility of building stock data needed to identify worst-performing buildings, set benchmarks, and monitor compliance.
- **Institutional mapping and analysis** – examining the mandates, responsibilities, and capacities of public authorities and agencies tasked with implementing, monitoring, and enforcing MEPS.
- **Financial instruments and support mechanisms** – reviewing existing and potential funding schemes, incentives, and financing tools that can enable compliance and reduce the burden on public funds.
- **Stakeholder mapping and engagement** – assessing the roles, interests, and capacity of key stakeholders, including government bodies, construction companies, financial institutions, and civil society in driving or supporting the MEPS agenda.

By ensuring these enabling conditions are in place, Member States can effectively implement MEPS for public buildings. In the following subsections, these five dimensions are elaborated in more detail.

2.1 National policy and legislative framework

National policy and legislative frameworks establish the environment within which MEPS can be introduced. A strong policy foundation provides legal clarity, ensures consistency with broader climate and energy strategies, and offers enforcement mechanisms.

Countries need to examine whether their existing building codes and energy efficiency laws provide a pathway for integrating MEPS. For instance, some countries may already have provisions for minimum standards in new buildings or requirements for energy performance certificates (EPCs); these can be extended or adapted to address the renovation of the worst-performing public buildings. Coherence with the EU Energy Performance of Buildings Directive (EPBD) and the Energy Efficiency Directive (EED) is particularly important. Enforcement tools are equally critical, since without monitoring,

penalties, and compliance systems, legislation risks remaining symbolic. Countries should also pay attention to policy alignment across sectors. For example, procurement rules that prioritise lowest-cost tenders may discourage deep renovations if they are not adjusted to integrate energy performance criteria. A readiness assessment in this dimension helps identify both enabling policies and legal gaps that must be addressed before MEPS can be enforced effectively.

Why is it critical in CEE: **In several CEE countries, enforcement of building regulations is weak or inconsistently applied.**

Recommended measures:

- Embed MEPS into national energy efficiency legislation, with clear thresholds and phased compliance deadlines.
- Align MEPS framework with the 2030 and 2050 climate targets.
- Integrate MEPS into National Energy and Climate Plans (NECPs) and National Building Renovation Plan (NBRP).
- Ensure consistency with climate adaptation, energy poverty reduction, and just transition strategies.
- Use MEPS as a tool to prioritize worst-performing public buildings – especially schools, hospitals, and social infrastructure.
- Strengthen enforcement bodies at national and local levels, ensuring they have legal authority and resources.

2.2 Data collection

Data collection underpins evidence-based policymaking and the practical implementation of MEPS. To identify the worst-performing public buildings, countries must rely on accurate, up-to-date, and comprehensive data. This typically includes information on energy performance certificates, building typologies, age, floor area, usage profiles, occupancy, and renovation history. Countries with a centralised building registry or energy database are better positioned to analyse their building stock and design tailored interventions.

The granularity of data is equally important: knowing not just average energy consumption, but the distribution of performance across different building types allows for more precise targeting of MEPS. Furthermore, data must be interoperable and accessible across relevant institutions, such as energy agencies, ministries, and municipalities. Where data gaps exist, countries may need to invest in building audits, energy monitoring systems, and digital platforms.

This dimension also involves data governance: ensuring that data is reliable, standardised, and updated regularly, while respecting privacy and security requirements. Strong data infrastructure reduces uncertainty, improves accountability, and allows for the effective monitoring of MEPS implementation.

Why is it critical in CEE: **In several CEE countries, enforcement of building regulations is weak or inconsistently applied.**

Recommended measures:

- Develop or update national building registries including age, typology, ownership, and EPC data – i.e. build a framework of EPCs with good national coverage and technical support.

- Use digital tools like Building Renovation Passports to ensure stepwise renovation is tracked and future-proof.
- Ensure data interoperability between national databases and local government systems.

2.3 Institutional mapping and analysis

Institutional mapping and analysis concern the roles, responsibilities, and capacities of public authorities and other institutions. Effective MEPS implementation requires a clear division of responsibilities across ministries (e.g., energy, finance, and public administration), energy agencies, regional authorities, and municipalities. Each actor needs both the mandate and the resources to fulfil its role.

Central governments are typically responsible for designing and legislating MEPS, while municipalities often serve as both implementers (renovating their own building stock) and enforcers (ensuring compliance at the local level). A readiness assessment should explore whether institutions have the technical skills, staff capacity, and budgetary resources needed for these functions. It should also examine mechanisms for horizontal and vertical coordination, ensuring that national standards are translated into regional and local action. Oversight bodies and independent regulators may also play an important role in monitoring compliance and ensuring transparency. Countries that are well-prepared evince not only institutional clarity but also robust coordination, effective communication channels, and mechanisms for dispute resolution and quality control.

Why is it critical in CEE: **Municipalities often lack skilled personnel and in-house expertise for renovation planning or MEPS enforcement.**

Recommended measures:

- Break down silos and foster collaboration between national/regional/local institutional actors (knowledge exchange).
- Establish regional technical support to assist municipalities and public building owners.
- Provide training for public officials, energy auditors, and building inspectors on MEPS compliance pathways.
- Share best-practice templates for staged renovation roadmaps to make compliance manageable for under-resourced municipalities.

2.4 Financial instruments and support mechanisms

Financial instruments and financial support mechanisms are critical because MEPS create obligations for renovation that require substantial investment. Public authorities, particularly at the municipal level, may lack the resources to meet MEPS requirements without adequate support. A readiness analysis should therefore assess the availability and accessibility of financial instruments, ranging from direct public funding (national budgets, EU structural funds) to more innovative mechanisms such as energy performance contracting, revolving funds, or PPP.

Well-designed incentives, subsidies, and grants can lower upfront costs and help overcome the financial barriers to renovation, especially for smaller municipalities with limited financial capacity. At the same time, it is essential to consider the long-term cost-effectiveness of MEPS. Renovations that reduce energy consumption not only lower operational expenses but also improve comfort, indoor air quality, and the resilience of public buildings. Countries with strong readiness in this dimension will have predictable,

well-structured financial support mechanisms that blend public and private finance, reduce risks for implementing authorities, and facilitate compliance across different levels of government.

Why is it critical in CEE*:* Many municipalities operate on tight budgets and cannot front-load renovation investments.

Recommended measures:

- Ensure EU and national funding (e.g. RRF, Cohesion Policy, Modernisation Fund) is accessible for MEPS compliance projects.
- Involve financial institutions and banks to develop innovative financing mechanisms to reduce risk for local governments and attract private capital.
- Use aggregated renovation programs (across multiple buildings or municipalities) to make projects bankable.

2.5 Stakeholder mapping and engagement

A successful introduction and enforcement of MEPS depend on the active involvement of a wide range of actors beyond government institutions. While ministries and local authorities provide the legal and policy framework, the implementation of renovation measures lies largely within the exercise of market actors such as construction companies, architects, engineers, energy service companies (ESCOs), and suppliers. Financial institutions play a crucial role in mobilising capital, while civil society organisations, building occupants, and the wider public contribute to acceptance, trust, and legitimacy.

Readiness in this dimension goes beyond identifying the relevant actors; it requires engagement strategies to ensure that stakeholders are meaningfully involved throughout the process. This includes early consultation during policy design, participatory approaches to setting priorities, and ongoing dialogue platforms that allow concerns to be addressed transparently. Engagement also means equipping stakeholders with the knowledge and tools needed to fulfil their roles. For example, construction companies may need know how on industrialised renovation techniques, while municipalities may benefit from training in procurement processes that integrate MEPS. Financial institutions may need targeted awareness-raising and de-risking instruments to increase their willingness to invest in public sector renovation.

Without strong engagement, MEPS risk being perceived as a top-down obligation that generates resistance rather than collaboration. With effective engagement, however, MEPS can become a shared effort that mobilises political will, builds market capacity, and ensures widespread support. Countries that demonstrate readiness in this area have established structured consultation mechanisms, stakeholder forums, and targeted communication campaigns that explain the benefits of MEPS in terms of energy savings, operational cost reductions, improved public service delivery, and progress toward national climate commitments.

Why is it critical in CEE*:* Stakeholders' understanding of MEPS is low; private sector participation in renovations is uneven across the region.

Recommended measures:

- Prepare engagement strategies to ensure that stakeholders are meaningfully involved throughout the process
- Launch targeted awareness-raising campaigns to explain why MEPS matter and what are the main benefits (energy savings, health, comfort).

- Actively involve ESCOs, building managers, and suppliers to develop local supply chains capable of meeting MEPS demand.
- Encourage pilot projects in small and medium cities to demonstrate feasibility and build confidence.

Together, these five dimensions — policy and legislative frameworks, data infrastructure, institutional capacity, financial mechanisms, and stakeholder engagement — offer a comprehensive approach through which countries can assess their preparedness for MEPS introduction in public buildings. They highlight that readiness is multi-faceted: it requires laws that are enforceable, data that is reliable, institutions that are capable, financing that is accessible, and stakeholders that are engaged.

By examining each dimension in detail, countries can identify areas of strength, gaps that need to be addressed, and priority actions to ensure that the introduction of MEPS is both feasible and impactful. This readiness assessment therefore serves not only as a diagnostic tool, but also as a roadmap for capacity building and reform, enabling governments to move from intention to implementation in the decarbonisation of the public building stock.

3. Designing MEPS for public buildings

As part of the efforts to accelerate building renovation and meet EU climate and energy targets, the introduction of MEPS for public buildings presents an opportunity that can overcome a breadth of structural, market and regulatory barriers that hindered the renovations sector in the countries under study. This potential can be realised if MEPS are carefully designed and integrated into a comprehensive renovation framework.

Building on the enabling conditions outlined in the previous chapter, the following section presents the core principles and considerations that would underpin an effective development and implementation of MEPS for public buildings in the region. These principles serve to guide the overall design logic and policy approach, ensuring they deliver the expected benefits in terms of energy savings, in aligning demand and supply chains, in providing an important space for innovation in the renovation process and stimulating the renovation market.

Core principles for MEPS design:

- **Public sector leadership**. Public buildings should serve as example in the energy transition.
- **Ambition with feasibility**. MEPS should drive meaningful improvement, but be grounded in national realities.
- **Progressive and predictable pathway**. MEPS should follow a clear and tightening timeline aligned with EU 2030 and 2050 targets.
- **Integration with other tools**. MEPS should be part of a broader policy and financing ecosystem.
- **Transparency and fairness**. Design should be inclusive and equitable, with clear rules and support for compliance.

Key considerations for MEPS development:

- **Building stock data and segmentation.** Robust data is essential for setting realistic and targeted thresholds.
- **Trigger points and timelines.** MEPS should be activated by clear events (e.g. major renovation) and future deadlines.

- **Support mechanisms.** Technical, administrative, and financial support must accompany MEPS.
- **Monitoring and Enforcement.** Systems must be in place to ensure accountability.

3.1. Design principles and schemes

Translating high-level principles into workable policy requires a careful balance between ambition, practicality, and clarity. While the core principles and considerations provide the strategic direction for MEPS, their impact ultimately depends on how they are embedded into national frameworks. This includes setting meaningful yet achievable thresholds, determining when and how standards apply, and ensuring alignment with other instruments and realities on the ground.

The design of MEPS must be both technically robust and administratively feasible to gain acceptance and drive real change in the public building stock. Designing MEPS for public buildings is not only a technical exercise but it is a strategic process that requires clarity, structure, and alignment with national renovation goals. The choice of implementation schemes, performance thresholds, and timelines must reflect local conditions while providing a strong and credible signal to public authorities. By integrating MEPS with supporting instruments, tailoring requirements by building type, and ensuring legal and administrative usability, governments can create a framework that drives real transformation in the public building stock. A well-designed MEPS scheme is ultimately a policy engine – one that can turn long-term renovation strategies into measurable, scalable outcomes. Adherence to the following MEPS design principles can contribute to achieving maximum impact from the implementation of the standards:

1. **Establish clear national performance thresholds**

To begin with, it is essential to define minimum performance levels – such as Energy Performance Certificate (EPC) classes or primary energy use – based on robust data from building stock assessments that accurately reflect the national stock's current condition and renovation potential. Utilizing public building inventories and digital registries allows for differentiation of thresholds according to building age, typology, and climate zone where appropriate, ensuring that standards are realistic and relevant.

2. **Define MEPS schemes: fixed vs. incremental vs. hybrid models**

Selecting a national MEPS scheme should consider the country's administrative capacity, renovation needs, and policy priorities. Options include a fixed minimum standard scheme, for example requiring all public buildings to reach EPC class C by 2030; an incremental pathway scheme mandating performance improvements at regular intervals; or a hybrid model combining fixed deadlines for the worst-performing buildings with phased improvements for others. It is also critical that the chosen scheme aligns with enforcement mechanisms, financing options, and supporting measures to ensure its effectiveness.

3. **Develop a staged and predictable compliance timeline**

MEPS should be introduced through a sequenced approach that starts by targeting the worst-performing segments of the building stock. Over time, the scope should expand towards achieving deep renovation goals. Combining trigger events, such as major renovations or ownership transfers, with clear time-based deadlines provides predictability and encourages timely compliance.

4. **Tailor MEPS by building category and function**

Different public building types – such as schools, hospitals, and offices – have varying use profiles, comfort requirements, and renovation feasibility. Therefore, it is important to apply standards tailored to these categories. Piloting MEPS schemes within one category before a full rollout can help test and refine the approach, ensuring practical implementation.

5. **Integrate MEPS with support instruments and operational tools**

Strong integration between MEPS and other relevant tools enhances the overall policy framework. This includes alignment with national building renovation norms and development of national Building Renovation Passports schemes to provide stepwise building renovation guidance in compliance with MEPS. Public procurement rules should require alignment with MEPS, while financial instruments are necessary to offset investment costs and reduce renovation risks. Digital building registries play a crucial role in supporting monitoring and data integration to track progress effectively.

6. **Provide for limited exemptions and flexible pathways**

It is important to define clear and justified exemptions, for example for heritage buildings or cases of technical infeasibility, which should be subject to independent assessment to maintain credibility. Additionally, allowing conditional compliance or alternative pathways – such as operational improvements or the implementation of energy management systems – can provide flexibility while still driving energy performance gains.

7. **Ensure legal certainty and administrative usability**

Finally, MEPS should be translated into legally binding provisions that are clear and easy to interpret and apply. Providing standardised documentation, checklists, and procedures helps building managers and public authorities fulfil their roles efficiently. Building capacity through targeted training and technical assistance schemes further supports the successful implementation and enforcement of MEPS.

3.2. Supporting measures

Robust MEPS cannot deliver their intended impact in isolation – they must be embedded in a supportive policy ecosystem that enables and motivates compliance. Public authorities, especially at the local level, often face financial, technical, and administrative constraints in renovating their building stock. To ensure that MEPS are both fair and effective, targeted support measures are essential. These include not only financial instruments and technical assistance, but also reliable data systems, digital tools, and capacity-building initiatives that help bridge the gap between policy ambition and implementation. The following policy recommendations outline key support mechanisms that can reinforce MEPS implementation and help overcome common barriers faced by public authorities.

1. **Financial instruments tailored to public sector needs**

Financial instruments tailored to the needs of the public sector play a critical role in facilitating renovations that comply with MEPS. Dedicated renovation funds, whether national or European, can provide co-financing for deep renovation projects, helping to alleviate upfront capital barriers. Preferential financing options, such as low-interest loans, grants, or blended finance solutions, should be designed to align with MEPS compliance timelines, ensuring that funding availability corresponds with renovation schedules. Additionally, mechanisms like energy performance contracting (EPC) and public-private partnerships (PPPs) can reduce initial costs by linking financing to actual energy savings and performance outcomes. To further incentivize proactive behaviour, budgetary rewards for public authorities that meet or exceed MEPS targets ahead of schedule can motivate earlier and deeper renovations.

2. **Technical assistance and capacity building**

Technical assistance and capacity building are indispensable in empowering public authorities to effectively navigate MEPS requirements. Establishing national or regional technical assistance centres can provide hands-on support for project preparation, energy audits, and feasibility studies, addressing knowledge and resource gaps. The provision of clear guidelines, toolkits, and standardized templates – tailored to different building categories such as schools, hospitals, and administrative offices – can simplify compliance processes and enhance consistency. Moreover, comprehensive training and capacity-building programs aimed at public building managers, procurement officers, and local

government staff can improve understanding of energy performance concepts and renovation workflows, thereby increasing implementation quality and efficiency.

3. **Digital tools and building data infrastructure**

Digital tools and a robust building data infrastructure form the backbone of monitoring, planning, and enforcing MEPS. Developing and maintaining digital Building Renovation Passports (BRPs) supports step-by-step renovation planning while enabling transparent tracking of MEPS compliance over time. Investment in comprehensive public building registries, integrated with EPC databases and renovation records, allows authorities to monitor progress accurately and target support where it is most needed. Furthermore, promoting user-friendly digital platforms that provide access to technical guidance, funding opportunities, and practical case studies can facilitate knowledge sharing and encourage best practices among public authorities.

4. **Strategic coordination and governance**

Strategic coordination and governance are vital to ensure coherent and effective MEPS implementation across all levels of government. Appointing a national MEPS coordination body or taskforce can oversee implementation efforts, facilitate the sharing of best practices, and provide a forum to troubleshoot common challenges faced by public institutions. Encouraging multi-level governance by involving regional and local authorities early in the design and rollout of MEPS support measures helps align policies with local realities and promotes ownership. Finally, establishing robust monitoring and evaluation mechanisms enables regular assessment of the effectiveness of support measures, allowing governments to adapt and improve these tools over time.

Supporting measures are the backbone of effective MEPS implementation. Without adequate financing, technical guidance, and digital infrastructure, even well-designed standards risk falling short in practice. Governments must therefore treat support systems not as optional add-ons, but as core components of a functioning MEPS framework – especially in the public sector, where capacity and investment cycles are often constrained. Strengthening these enabling conditions will be key to unlocking a higher pace and depth of renovation across the public building stock.

3.3. Framework for monitoring and evaluation of process and outcomes

Establishing MEPS is not only about setting standards, it is equally about ensuring that they are implemented, enforced, and adjusted based on real-world outcomes. A robust monitoring and evaluation (M&E) framework is essential to track progress, support compliance, and generate the evidence needed to refine policy design over time. Such a framework must capture both quantitative impacts, like energy savings and renovation rates and qualitative insights about how the policy is working in practice. It should be integrated in existing building datasets and governance structures and designed with sufficient granularity to assess not only outcomes but also processes and compliance.

The monitoring and evaluation framework for MEPS should be designed as an integrated system that captures both outcomes and implementation processes. To provide an overview of its key components, the infographic below (see Figure 1) summarizes the six core dimensions of a robust MEPS monitoring and evaluation approach. These interconnected elements reflect the tools, metrics, and governance practices needed to track progress, ensure compliance, and continuously refine the policy framework.

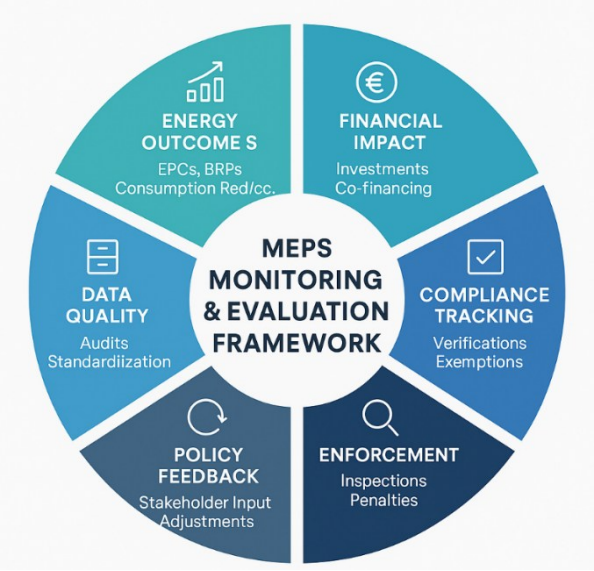

Figure 1: Integrated MEPS Monitoring and Evaluation Framework

3.3.1. Tools and mechanisms for monitoring and evaluating outcomes

Monitoring the outcomes of MEPS implementation is essential to assess their effectiveness and justify continued investment in public building renovation. This requires a structured set of tools and indicators to measure energy savings, renovation activity, and investment mobilisation. At the same time, ensuring the quality and reliability of reported data is critical for building trust in the results and enabling data-driven policy adjustments.

A key component of effective monitoring is the use of **Core Performance Indicators (CPIs).** These are defined quantitative metrics that allow policymakers to track progress over time. Typical CPIs include the reduction in energy consumption in public buildings, the number and share of worst-performing buildings that have undergone renovation, the volume and sources of public investment mobilised for renovation efforts, and the proportion of public buildings achieving MEPS thresholds ahead of established deadlines. By consistently applying these indicators, authorities can gain a clear picture of how well MEPS are being implemented and where additional efforts may be needed.

Energy performance reporting and building data tools play a critical role in tracking MEPS outcomes. Regular reporting should be mandated, requiring updated Energy Performance Certificates (EPCs) at trigger points such as major renovations, lease agreements, or building sales. This reporting should be integrated with digital Building Renovation Passports (BRPs), which facilitate step-by-step renovation planning. A centralised digital registry, linked with MEPS compliance timelines, can consolidate these data and provide an accessible and up-to-date overview of the renovation status across the public building stock.

To ensure the reliability, consistency, and usefulness of MEPS-related data, **data quality and verification mechanisms** must be embedded within the monitoring system. Accurate data is not only essential for assessing policy effectiveness but also for maintaining trust among stakeholders and enabling adaptive management.

First, data collection and reporting must be based on **standardised methodologies** that are applied consistently across all regions and levels of government. For example, the energy consumption of public buildings should be measured using harmonised metrics (e.g., kWh/m²/year) and aligned with national definitions of building types, renovation stages, and MEPS thresholds. Uniform guidelines should also define how to calculate savings from different types of interventions (e.g. insulation, HVAC upgrades, lighting retrofits), ensuring comparability across projects and jurisdictions.

Controlling energy audits are another key tool to verify submitted data and detect discrepancies. These can be carried out by independent third-party bodies or designated national agencies and might include random sampling of reported cases, comparison of submitted EPCs with on-site conditions, or checks against utility bills and smart meter data.

In addition, **periodic quality assurance reviews** should be conducted to assess the overall completeness, accuracy, and internal consistency of the data. These reviews can help detect broader issues such as underreporting of exemptions, inconsistent classification of buildings, or gaps in geographic coverage. For example, a national review might reveal that smaller municipalities consistently fail to update EPCs after renovations, prompting targeted support or process improvements.

Other effective mechanisms include **automated data validation systems** embedded in digital platforms. These systems can flag anomalies, such as energy savings that far exceed typical benchmarks, missing documentation, or inconsistent MEPS deadlines and prompt manual checks or clarification before the data is accepted into the central registry.

Finally, governments can encourage better data practices through **capacity-building and feedback loops**. Providing training for local officials and building managers on proper data collection and reporting methods helps improve accuracy at the source. Sharing feedback and benchmark comparisons with reporting entities can also foster a culture of continuous improvement.

By combining these measures – standardised methods, regular audits, quality assurance reviews, automated checks, and local capacity support – governments can ensure that MEPS implementation is based on credible, high-quality data that supports effective decision-making and public accountability.

Finally, it is important to track MEPS implementation integrity through **compliance and risk indicators**. These include the number of MEPS compliance verifications conducted annually, the number of identified cases of non-compliance, penalties or corrective actions taken, and the percentage of buildings that receive exemptions or derogations. By monitoring these indicators, governments can assess the enforcement of MEPS and identify any systemic issues or risks that may undermine their effectiveness.

To support implementation and facilitate policy coordination, the Table 1 summarises the main areas of MEPS monitoring, recommended tools and mechanisms, and corresponding indicators. It is intended as a reference framework for national and local authorities to use when designing or refining their own monitoring systems.

Table 1: MEPS monitoring: areas, tools and indicators

Monitoring Area	Key Tools & Mechanisms	Example Indicators
Energy & Renovation Outcomes	EPC updates, BRPs, digital energy reporting systems	Reduction in energy use, % of worst-performing buildings renovated
Financial Impact	Investment tracking via renovation funds and co-financing platforms	Amount of public funding mobilised; share of EU/national sources
Data Quality	Standardised reporting protocols, audits, automated validation	Consistency rates; number of discrepancies flagged or corrected
Compliance Tracking	Compliance indicators, exemption reporting, enforcement databases	Verifications conducted; number of irregularities/penalties issued
Verification & Enforcement	Independent site inspections, desk audits, technical assessment reviews	Sanctions applied; corrective actions implemented

Policy Process & Learning	Iterative review cycles, stakeholder feedback, pilot programme assessments	Adjustments made to MEPS schemes; participation in consultations

3.3.2. Compliance and verification mechanisms

A well-functioning MEPS framework must be underpinned by robust compliance and verification mechanisms. These ensure that public bodies follow through with their obligations and that any deviations from required performance levels are identified and addressed. Clear protocols, independent oversight, and a proportionate enforcement system are key to maintaining policy credibility and ensuring fair application across the public sector.

Clear compliance protocols

The first step in ensuring effective implementation is to establish clear and transparent compliance protocols that define who is responsible for what, by when, and how. Public authorities must know exactly what documentation is required to demonstrate MEPS compliance. This typically includes submitting updated Energy Performance Certificates (EPCs), detailed renovation records, and evidence of achieved performance levels (e.g., measured energy consumption after renovation).

Protocols should also define compliance timelines, particularly in relation to trigger events such as major renovations, changes in ownership, new tenancy agreements, or significant upgrades of building systems. For example, a rule might require that within a certain period of completing a major renovation, a public authority must submit an updated EPC along with a post-renovation energy audit. In another case, buildings leased or sold after a certain date may be required to meet MEPS thresholds as a condition of the transaction.

To ensure consistency across jurisdictions, standardised checklists and templates should be provided to help public bodies submit the correct information and to allow verification agencies to assess compliance efficiently. These tools should be adapted to different types of public buildings – such as schools, administrative buildings, and healthcare facilities – recognizing their varying operational profiles and renovation challenges.

Independent verification systems

Independent oversight adds credibility and impartiality to the MEPS framework. Third-party or semi-independent entities – such as national energy agencies, certified EPC assessors, or designated verification authorities – can be mandated to perform a variety of critical tasks. These include site-based inspections, desk audits of documentation, and reviews of technical assessments related to compliance claims, exemptions, or requests for flexible pathways.

For example, in the case of a public hospital applying for a partial exemption from MEPS due to ongoing infrastructure upgrades, a third-party body could assess whether the request is technically justified and whether the proposed timeline for eventual compliance is realistic. Similarly, if a municipality reports that it has brought all its public schools to EPC class C ahead of schedule, an independent verifier could randomly select a sample of buildings to inspect and validate the claim.

In some countries, this role may be fulfilled by a centralised MEPS compliance unit within an existing agency, while in others it could be delegated to regional actors with local knowledge. Regardless of structure, such systems must be adequately resourced and shielded from conflicts of interest to ensure impartial and reliable assessments.

Enforcement and corrective measures

To maintain the integrity of the MEPS system, non-compliance must be addressed through a transparent and proportionate enforcement regime. This begins with graduated enforcement, allowing for corrective actions before penalties are imposed. For example, if

a public authority misses a MEPS deadline for a set of buildings, it might first receive a formal notice outlining the shortfall and be given six months to rectify the issue.

If compliance is not achieved within the correction period, more serious consequences may follow. These could include administrative fines, withholding of renovation-related funding, or temporary restrictions on new public investment projects for the non-compliant entity. For instance, a ministry that fails to renovate its administrative buildings according to MEPS might be required to redirect part of its operational budget toward retrofitting or face reduced access to co-financing schemes for future projects.

In more severe cases, naming and shaming mechanisms – such as public disclosure of non-compliant authorities – can act as reputational levers, especially when tied to broader transparency initiatives. Governments may also consider linking compliance to broader financial frameworks, such as regional development strategies, by conditioning certain transfers or grants on progress toward MEPS targets.

To be effective, enforcement mechanisms must be supported by clear legal backing, consistent application, and a fair appeals process that allows authorities to contest findings or propose alternative compliance plans when justified.

3.3.3. Monitoring and evaluating MEPS policy process

In addition to tracking outcomes and enforcing compliance, it is vital to monitor how the MEPS policy itself is functioning over time. This involves assessing implementation processes, identifying barriers, and incorporating lessons learned into future policy design. Iterative evaluation and feedback loops enable MEPS to evolve based on evidence and stakeholder input, ultimately strengthening their relevance and long-term effectiveness.

One key element is the establishment of iterative feedback loops. Regular policy reviews should be institutionalised to evaluate how MEPS are being implemented, what challenges are emerging, and what adjustments may be necessary. These reviews could take the form of annual or biennial evaluation reports that draw on monitoring and evaluation (M&E) data, such as compliance rates, renovation progress, and funding uptake. To complement these technical assessments, stakeholder consultations should be conducted to gather direct input from local authorities, public building managers, and other frontline actors. In some cases, pilot programmes or regional trials can be used to test specific aspects of the MEPS design—such as new thresholds or compliance tools—before they are scaled up at the national level.

Effective monitoring and adaptation also require governance structures that support flexible policy design. Responsibility for this function should be assigned to a central coordinating body or inter-agency taskforce capable of tracking both technical outcomes and institutional challenges. This body should be empowered to recommend adjustments to regulations, compliance procedures, or support mechanisms as needed. It should also ensure that MEPS remain aligned with broader policy objectives, such as long-term building renovation strategies and associated financing instruments, so that the overall framework remains coherent and integrated.

Finally, the monitoring and evaluation process can serve as a powerful tool for learning and capacity building. By identifying gaps in administrative capacity, technical knowledge, or resource availability, M&E insights can inform the design of future support measures. For instance, if a lack of expertise in EPC assessment is identified as a recurring issue among municipalities, this can trigger the development of targeted training programmes or helpdesk services. Similarly, weaknesses in data collection processes may highlight the need for investment in digital infrastructure or updated reporting protocols. By treating policy monitoring as a learning opportunity, governments can continually improve the MEPS framework and better support the public sector in meeting its renovation goals.

4.Implementation

The implementation of MEPS for the worst-performing public buildings represents a significant step toward the decarbonisation of Europe's building stock and the achievement of the EU's long-term climate and energy objectives. While MEPS provide a binding obligation for improving the energy performance of public buildings, they do not prescribe a one-size-fits-all approach. Member States retain considerable room to tailor implementation to national capacities, priorities, and constraints. Carefully balancing regulatory firmness with operational flexibility is essential to ensure cost-effective, equitable, and high-impact renovations across the EU public sector.

As seen in previous chapters, introducing MEPS requires a structured, phased process that considers the diversity of public building portfolios, institutional capacities, and financial contexts. Implementation is not limited to adopting legislation; it involves a coherent set of actions ranging from policy design and data-driven planning to financing strategies, capacity building, stakeholder engagement, and robust monitoring. Each of these steps must be tailored to the specific governance systems and market conditions of the Member State in question, while remaining aligned with EU-level requirements and objectives.

This section provides guidance for Member States on designing and managing the national-level implementation process of MEPS. It outlines the typical phases and key steps involved, highlights the choices available to governments in adapting MEPS to national circumstances, and draws attention to potential challenges and enablers. The aim is to support policymakers and practitioners in creating implementation pathways that are both ambitious and realistic — pathways that reduce energy use, cut emissions, lower operational costs, and improve the quality of public services, while building a renovation ecosystem that is capable of sustaining long-term transformation.

To support the implementation process, Member States can follow a roadmap, as illustrated in Figure 2 below, that unfolds in four interlinked phases: preparatory groundwork, legal adoption, operationalization, and monitoring and enforcement. Each phase involves specific actions, actors, and enabling conditions that together ensure successful, sustainable implementation.

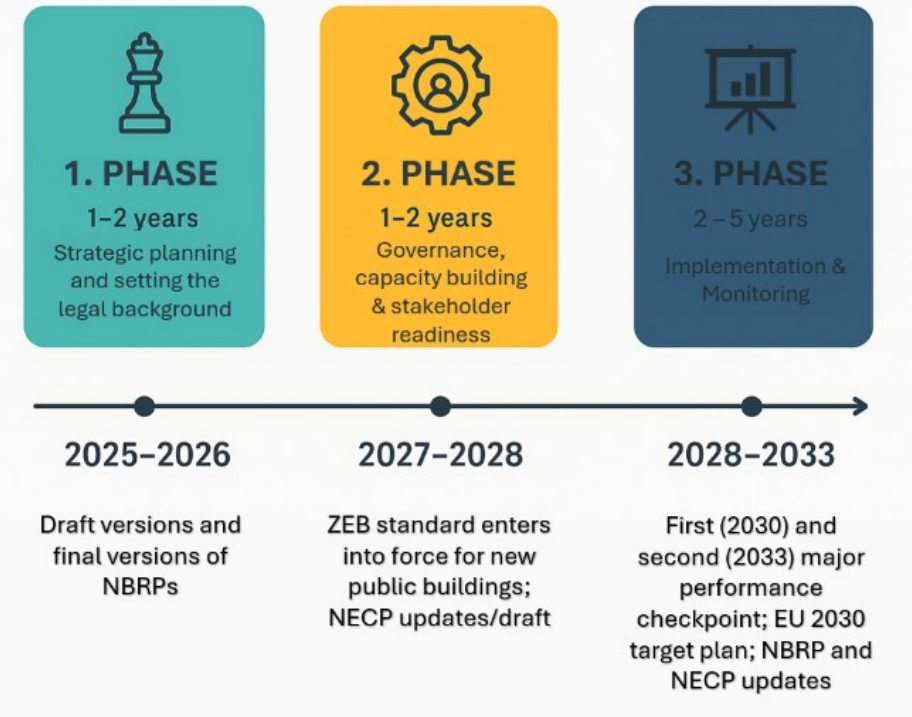

Figure 2: Implementation Roadmap for MEPS

PHASE 1: Strategic planning and setting the legal background (1-2 years)

The legal adoption phase must balance ambition with feasibility, ensuring that requirements are sufficiently stringent to drive meaningful improvements but realistic enough to be met by public authorities. In this phase it is crucial to build MEPS into both local and national long-term climate objectives and strategies, for example through energy and climate action plans (NECPs) and long-term renovation strategies (LTRS), soon to be replaced by national building renovation plans (NBRPs). This type of integration ensures that MEPS are led by long-term roadmaps and that renovation activity does not occur in isolation from climate objectives. MEPS based on a deep renovation or progressive standard can set out the long-term destination for each building to be net-zero carbon in 2050.

KEY ACTIVITIES

ACTIVITY	KEY STAKEHOLDER(S)	TIMELINE/EU ALIGNMENT
Transpose MEPS into national law	Relevant ministries and other national institutions	2025-2026 Draft versions and final versions of NBRPs
Develop a national MEPS implementation plan, setting objectives, timelines, and financing approaches	Relevant ministries with support from experts	
Perform national stock segmentation and baseline analysis	Energy institutes, energy agencies and universities	
Define MEPS scope (building types, energy thresholds, compliance dates)	Relevant ministries with support of experts and expert associations	
Establish National MEPS Task Force	Representatives of relevant ministries, regional representatives and expert associations	
Design MEPS enforcement mechanism and penalties	Relevant ministries - regulators	
Ensure policy coherence with procurement rules, renovation programmes, and national climate strategies.	Relevant ministries with support from experts	
Draft integration into National Building Renovation Plan (NBRP)	Relevant ministries with support from experts	

PHASE 2: Governance, capacity building & stakeholder readiness (1-2 years)

This phase transforms legal commitments into actionable programmes and projects. In this phase it's necessary to set-up a reliable coordination structure, with defined task allocations and clear delineation of roles and responsibilities across levels of government. Besides, decarbonizing the building stock through accelerated delivery of energy savings measures and heating system replacements will require significantly upscaled, upskilled and adapted supply chain. By guaranteeing renovation activity, MEPS are an important tool to provide the supply chain with the confidence to scale.

KEY ACTIVITIES

ACTIVITY	KEY STAKEHOLDER(S)	TIMELINE/EU ALIGNMENT
Setting up technical assistance - Regional Support Hubs (renovation helpdesks)	Regional energy agencies	2027-2028 ZEB standard enters into force for new public buildings; NECP updates/draft
Publish technical guidelines and standards for MEPS-compliant renovations	Relevant ministries with support from experts	
Create digital registry and tracking system (e.g. MEPS compliance module in EPC database)	Relevant ministries with support of experts from IT sector	
Deliver trainings to local authorities, professional experts, energy auditors, and enforcement officers	Training institutions, universities, VET providers, Professional Chambers	
Launch national communication and awareness campaigns	MEPS Task Force with support of communication experts and media	
Initiate stakeholder platforms and dialogues (industry, cities, NGOs)	MEPS Task Force with support of Chambers of commerce, CGBC, cities	

PHASE 3: Implementation & Monitoring (2-5 years)

This phase is crucial because it involves notifying building owners about compliance requirements, initiating actual renovations (for the worst-performing public buildings), and ensuring that enforcement mechanisms are operational. Enforcement must be credible, with clear penalties for non-compliance and transparent procedures for handling exceptions. At the same time, monitoring should serve as a tool for learning and adaptation: regular evaluations allow governments to refine standards, adjust support mechanisms, and respond to emerging challenges such as skills shortages, supply chain constraints, or financial gaps.

This phase should also include structured knowledge sharing, both within the Member State and across the EU, to ensure that lessons learned contribute to continuous improvement of MEPS design and delivery. Success in this phase depends on strong multi-level coordination, accessible technical and financial support, and clear communication between authorities, building owners, and renovation professionals.

KEY ACTIVITIES

ACTIVITY	KEY STAKEHOLDER(S)	TIMELINE/EU ALIGNMENT
Notify first tranche of buildings subject to MEPS	MEPS Task Force with support of municipalities and building owners	2028-2033 First (2030) and second (2033) major performance checkpoint; EU 2030 target plan; NBRP and NECP updates
Launch financing programmes and provide technical support tools	Relevant ministries, regional support hubs and financing institutions	
Monitor implementation progress and non-compliance cases - inspections	Relevant ministries – regulator or audit authority/offices	
Apply penalties or corrective measures in cases of non-compliance, ensuring credibility of MEPS	Relevant ministries – regulator or audit authority/offices	
Feed results into NECP and NBRP reporting cycles	Relevant ministries with support from experts	

Evaluate results, share lessons learned and refine MEPS design and enforcement	EU Commission, relevant ministries, MEPS Task Force	

By following this three-phase roadmap, Member States can move systematically from intention to implementation. Each phase builds on the previous one, creating a process that is ambitious yet adaptable, firm yet flexible. Implemented effectively, MEPS will not only reduce energy consumption and emissions but also lower operating costs, improve comfort in public buildings, and demonstrate leadership in the transition to a decarbonised built environment.

5. Conclusions and recommendations

MEPS provide a structured framework for accelerating the renovation of the worst-performing public buildings, turning renovation from a voluntary objective into a binding legal obligation. Public sector buildings, particularly schools, hospitals and administrative premises, are well placed to play a leading role given their high visibility and the opportunity they offer to demonstrate concrete results.

However, implementation remains heavily dependent on the availability of reliable and up-to-date building stock data. Without accurate information, Member States will struggle to determine appropriate performance thresholds, target financial and technical support effectively, or monitor compliance over time. Although several EU funding instruments such as the RRF and Cohesion Funds are already available, securing adequate financing for deep renovation continues to be a major barrier, especially for small and under-resourced municipalities.

In this context, MEPS should be designed to reflect local conditions, differentiated by building type, use and climatic zone, and introduced through phased and predictable timelines. The credibility of the approach will ultimately depend on robust governance arrangements, clear enforcement procedures and sufficient local capacity. Establishing transparent stakeholder processes, including meaningful consultation with local authorities and building owners, will be equally important to ensure buy-in and to address emerging implementation challenges.

Looking ahead, Member States should consider aligning MEPS with national long-term renovation strategies and climate targets, integrating performance thresholds into broader public sector performance frameworks. Developing and maintaining high-quality national databases, including EPC registries and renovation passports, will be essential to support decision-making and monitoring. Finally, support mechanisms, financial, technical and administrative, should be adapted to national and local specificities, with special attention paid to the needs of municipalities in CEE.

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