

## **Preparedness for EPBD Implementation through National Workshops and Stakeholder Engagement in Six EU Member States**

### **BRIEF 3 – GREECE**

#### **Challenges and Renovation Pathways to Achieve a Zero-Emission Building Stock by 2050**

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## 1. Executive Summary

This brief outlines the key challenges and opportunities associated with achieving a zero-emission building stock in Greece by 2050, a target that is both technically demanding and socially imperative. The decarbonisation of the Greek building sector is central to the country's climate strategy, given its high share in final energy use and carbon emissions. While the Energy Performance of Buildings Directive (EPBD) and national strategies provide the legal and strategic foundations, persistent delivery gaps continue to hinder large-scale progress.

Major obstacles include fragmented governance structures, limited access to affordable financing for small and medium-sized enterprises (SMEs) and low-income households, a lack of skilled workforce in key regions, and shallow renovation practices that fall short of deep energy savings. These barriers are particularly acute in rural, island, and vulnerable urban areas, where outdated housing, energy poverty, and institutional weaknesses converge.

In response, this brief presents a tailored renovation roadmap for Greece, focusing on five interdependent pillars: a tiered rollout of Minimum Energy Performance Standards (MEPS); promotion of staged and deep renovation through building renovation passports; the institutionalisation of local One-Stop Shops; enhanced support for SME and ESCO market participation; and a national strategy to upskill the renovation workforce. These recommendations are grounded in a commitment to social justice, digital innovation, and regional differentiation, essential components of a just and effective energy transition.

## 2. The Urgency of Deep Renovation in Greece

The need for deep renovation in Greece has become increasingly urgent in light of the country's ageing and inefficient building stock. More than 75% of residential and non-residential buildings were constructed before the introduction of basic thermal insulation regulations in 1980. Approximately four out of five buildings fall into the lowest categories of energy performance, namely EPC classes E, F, and G. These buildings are not only energy inefficient but also structurally unprepared to cope with modern climate extremes.

Greece's Mediterranean and mountainous climate presents a dual burden of prolonged winter cold and increasingly severe summer heatwaves, requiring significant energy input for both heating and cooling. This climate vulnerability, when combined with outdated construction and poor insulation, contributes to disproportionately high household energy costs, especially in regions such as Western Macedonia, Eastern Macedonia and Thrace, and the North Aegean. These areas consistently report some of the highest energy poverty indicators in the EU.

The renovation rate remains below 1% annually, with most interventions classified as shallow renovations, limited to single upgrades (e.g., window replacements or boiler changes) without comprehensive energy performance improvements. This slow and fragmented pace is insufficient to meet national climate commitments. According to Greece's revised National Energy and Climate Plan (NECP), at least 12% of the building stock must be renovated by 2030 to remain on track toward a zero-emission target by 2050.

Without a significant acceleration in both the depth and scale of energy renovations, Greece risks undermining its decarbonisation pathway, worsening energy inequality, and missing out on the broader economic, public health, and resilience benefits that a modernised building stock can deliver. Deep renovation must become a structural priority of national energy and social policy.

### 3. Main Challenges to Building Renovation in Greece

While Greece has taken essential steps to strengthen its legislative and financial framework for building renovation, a wide gap remains between policy ambition and on-the-ground outcomes. The renovation rate remains below 1% annually, and most interventions lack depth, failing to deliver the energy savings and emission reductions required under national and EU climate goals. A combination of persistent barriers, including fragmented governance, inadequate access to finance, skills shortages, limited technical capacity, and weak social targeting, continues to hinder progress. These challenges are particularly pronounced in regions with high energy poverty and vulnerable populations, threatening to widen social and territorial inequalities if left unaddressed. This section presents an overview of the most significant structural, financial, institutional, and operational barriers that must be resolved to accelerate renovation at the necessary scale and depth.

<b>Category</b>	<b>Challenge</b>	<b>Description</b>
<b>Financial</b>	Inadequate access to affordable financing	Especially for SMEs and low-income households
<b>Social</b>	Exclusion of vulnerable groups	Procedural and information barriers persist
<b>Technical</b>	Shortage of skilled labour	Particularly in rural and island areas
<b>Regulatory</b>	Fragmented policies and unclear enforcement	Multiple programmes, slow MEPS rollout
<b>Administrative</b>	Limited local capacity	Municipalities lack expertise and staff
<b>Behavioural</b>	Low awareness, split incentives	Especially in rented and multi-owner buildings

## 4. Lessons Learned from Previous Programmes

Greece's experience with renovation funding schemes over the past decade, most notably the "Exoikonomo" programme, offers important lessons for future policy development and delivery. While these initiatives have succeeded in initiating market activity and raising awareness around energy renovation, their structure and implementation have exposed key limitations that must be addressed to support large-scale, equitable, and deep renovation in line with 2050 targets.

A primary lesson concerns the depth of renovation achieved. Most interventions supported under existing programmes have been shallow in nature, focusing on low-cost, individual upgrades such as window replacements or heating system improvements. While beneficial, these measures rarely deliver the comprehensive energy savings required to move buildings toward zero-emission standards. The lack of incentives for deep renovation, combined with technical and financial barriers, has resulted in underperformance relative to the national climate targets. Future programme cycles must prioritise packages of integrated upgrades and introduce minimum thresholds for energy performance improvement to avoid lock-in effects.

A second issue relates to the social targeting of funding. While recent iterations of "Exoikonomo" have introduced income-based prioritisation, access to funding continues to favour middle- and high-income households with more substantial administrative capacity. Vulnerable populations, such as low-income families, elderly residents, and renters, are systematically underrepresented among programme beneficiaries. These groups often lack the financial liquidity, digital access, or technical support needed to navigate application procedures. Addressing this requires the introduction of pre-financing options, simplified procedures, and stronger cooperation with local authorities and social services.

A third lesson concerns regional disparities in programme uptake. Urban centres and wealthier municipalities have typically been more successful in mobilising applications and co-financing. At the same time, island regions, rural communities, and areas with higher levels of energy poverty have been underserved. The uneven geographic distribution of technical support services, energy auditors, and construction capacity further exacerbates this imbalance. Future programmes must incorporate territorial equity criteria and invest in capacity-building at the local level to ensure more balanced implementation.

The administrative complexity of the schemes has also limited their accessibility and efficiency. Applicants are often required to complete lengthy documentation, navigate digital platforms with limited support, and coordinate multiple approvals within tight timeframes. Stakeholders have also cited delays in disbursement and a lack of transparency in evaluation processes as barriers to trust and participation. Streamlining procedures, standardising documentation, and deploying user-friendly digital tools through One-Stop Shops can significantly improve the user experience and efficiency of delivery.

Finally, the lack of systematic monitoring and evaluation mechanisms has made it difficult to assess the long-term impact of renovation measures. Programme success is often measured in disbursement rates or the number of applications, rather than verified energy savings or social outcomes. Developing a national renovation database, integrating EPC data with actual energy consumption, and introducing post-renovation audits would strengthen accountability and provide evidence for continuous programme improvement.

These lessons collectively point to the need for a paradigm shift: from short-term subsidy schemes toward an integrated, long-term renovation strategy that balances energy performance, affordability, and social inclusion. The next generation of programmes must be designed to deliver not just higher uptake, but higher quality and greater equity in outcomes—anchored in a whole-building, whole-population approach to renovation.

## 5. Strategic Renovation Pathways

Achieving a climate-neutral building stock by 2050 will require Greece to transition from piecemeal interventions to a structured and forward-looking renovation framework. The following five pathways represent key levers of change, rooted in the provisions of the EPBD Recast and the lessons learned from recent national implementation experience.

### 5.1 Phased introduction of Minimum Energy Performance Standards (MEPS):

Greece should adopt a legally binding trajectory for MEPS, gradually eliminating the worst-performing building segments (EPC classes G and F) from the market. These standards must be accompanied by robust social safeguards, targeted financial support, and a clear compliance framework. MEPS should begin with public and commercial buildings and progressively extend to owner-occupied and rented residential stock. Timely communication and capacity-building will be key to ensuring acceptance and compliance.

### 5.2 Deployment of Building Renovation Passports (BRPs):

Staged renovation must be underpinned by a formalised, long-term planning tool. BRPs can guide property owners through a step-by-step pathway toward full decarbonisation, tailored to building typology and financial capacity. As foreseen in the EPBD, Greece should begin piloting BRPs in partnership with the Technical Chamber of Greece (TEE), energy auditors, and One-Stop Shops, with a view to scaling up nationally in the next NECP cycle.

### 5.3 Scaling and institutionalisation of One-Stop Shops (OSS):

One-Stop Shops offer integrated renovation services—from energy assessments and financial advice to contractor coordination. While some pilot OSS have been launched, their reach remains limited. Institutionalising OSS at the municipal or regional level, with sustained funding and formal roles, will be essential to support citizens, especially in rural and vulnerable areas. OSS should act as trusted intermediaries between the state, the market, and civil society.

### 5.4 Market mobilisation of SMEs and Energy Service Companies (ESCOs):

Renovation at scale cannot be delivered without active engagement from the private sector. SMEs, local construction firms, and ESCOs must be supported through access to finance, pre-qualification schemes, and aggregation platforms that allow for bundling of smaller renovation projects. Regulatory clarity and long-term market signals—such as predictable MEPS—can help unlock private investment in energy efficiency solutions.

### 5.5 National skills and workforce development strategy:

The success of all renovation pathways depends on the availability of skilled professionals—from energy auditors and engineers to on-site technicians. Greece should adopt a coordinated national training strategy, linked to labour market needs and regional renovation demand. This

could include certification programmes, apprenticeships, and digital learning platforms. Emphasis should also be placed on attracting youth and reskilling unemployed workers, ensuring a socially inclusive green transition.

Together, these five pillars form the backbone of a coherent national roadmap to 2050. They must be developed in parallel and integrated within Greece's revised NECP, Long-Term Renovation Strategy, and Recovery and Resilience Plan updates.

## 6. Conclusions and Next Steps

Achieving a zero-emission building stock by 2050 is both a climate imperative and a socio-economic opportunity for Greece. The country's building sector is characterised by deep structural inefficiencies, ageing infrastructure, and high levels of energy poverty, particularly in vulnerable and underserved regions.

While national and EU policy frameworks have begun to converge around a more ambitious renovation agenda, progress remains hindered by persistent delivery barriers, including fragmented governance, limited access to finance, workforce shortages, and insufficient targeting of the most affected populations.

The Greek experience with past programmes highlights both the potential and limitations of current policy tools. While awareness and participation have grown, shallow renovation practices and uneven access to funding have curtailed the full impact of investments. Lessons learned from these initiatives should inform a new generation of programmes that are equitable, strategic, and anchored in long-term planning.

This brief outlines five interdependent renovation pathways that offer a roadmap for progress: the adoption of Minimum Energy Performance Standards, the rollout of Building Renovation Passports, the scaling of One-Stop Shops, the mobilisation of SMEs and ESCOs, and national investment in skills development. These interventions must be integrated into a coherent policy ecosystem, coordinated across levels of government, and accompanied by robust monitoring frameworks.

The transposition of the EPBD Recast offers a timely opportunity for Greece to align its domestic renovation strategy with European climate objectives. But legislative compliance alone will not be sufficient. What is required is a systemic shift toward inclusive, deep, and scalable renovation that delivers measurable benefits for people, the economy, and the environment. With clear political commitment, targeted investment, and effective coordination, Greece can position building renovation as a central pillar of its green transition, one that leaves no region or household behind.