

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

### **BRIEF 1 – GREECE**

#### **Legislative and Policy Landscape for Energy Renovation in Greece**

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## 1. Executive Summary

Energy renovation plays a vital role in achieving Europe's 2050 climate neutrality target and offers substantial co-benefits for citizens, businesses, and governments. In Greece, where the building stock is among the oldest and least efficient in Europe, the societal and economic implications of large-scale energy renovations are particularly significant.

This briefing aims to provide a concise overview of how building renovation contributes not only to climate and energy goals but also to broader national priorities, including alleviating energy poverty, promoting public health, fostering employment, driving economic development, and enhancing social cohesion.

While considerable public attention is often given to the financial cost of renovation, this document focuses on the societal return on investment, the value it creates for people, regions, and public systems. Highlighting such benefits is crucial to ensure the design of inclusive policies and garner broad stakeholder support for Minimum Energy Performance Standards (MEPS) and long-term renovation strategies.

The evidence and recommendations presented here are based on data from national sources, EU studies, and stakeholder insights collected within the context of the "Preparedness for EPBD Implementation through National Workshops and Stakeholder Engagement in Six EU Member States" project.

## 2. Energy Renovation: A Strategic Necessity

Buildings in Greece account for nearly 40% of final energy consumption, with residential structures being among the oldest and least efficient in the EU. More than 55% of homes were built before 1980, predating the introduction of any national thermal insulation requirements. The result is a highly energy-intensive building stock that contributes to elevated energy costs, CO<sub>2</sub> emissions, and public health risks. Greece's energy renovation agenda aligns with key European and national strategies, including:

- The EU Green Deal and Fit-for-55 package, which sets higher targets for building energy performance.
- The revised Energy Performance of Buildings Directive (EPBD Recast – 2024) mandates the introduction of Minimum Energy Performance Standards (MEPS).
- Greece's National Energy and Climate Plan (NECP) sets a target of reducing building sector emissions by over 30% by 2030.
- The Long-Term Renovation Strategy (LTRS), which identifies energy renovation as central to meeting national climate goals and reducing dependency on imported fuels.

Given the country's dual exposure to cold winters and extreme summer heat, improving the thermal performance of buildings is also an adaptation imperative. Greece's building sector plays a strategic role not only in climate policy, but also in reducing energy poverty, enhancing public health, boosting economic activity, and building national resilience to future energy shocks.

## 3. Societal Benefits

### 3.1. Addressing Energy Poverty

Greece continues to face one of the highest rates of energy poverty in the European Union, affecting an estimated 25–30% of households in certain regions. Vulnerability is concentrated among low-income families, the elderly, renters, and populations in remote, rural, or island communities, many of whom reside in poorly insulated, inefficient homes that require disproportionate energy to maintain basic comfort levels.

Energy renovation has a direct and measurable impact on mitigating this challenge. Improved insulation, efficient heating and cooling systems, and passive design measures can substantially lower energy bills, reduce reliance on polluting fuels (e.g. wood stoves, kerosene), and enhance thermal comfort. These outcomes are particularly relevant for vulnerable groups who often sacrifice adequate heating or cooling due to cost, leading to heightened health risks.

According to the Greek Energy Poverty Observatory, two national indicators, I-II and I-IIeq, are used to classify households as energy-poor. Regions with the highest vulnerability include:

- Western Greece (EL63): 53.3% of households in arrears on utility payments
- Eastern Macedonia and Thrace (EL51): 61.8% in arrears; high winter heating demand
- Ionian Islands (EL62): High reliance on air conditioning and diesel generators

These indicators capture the link between low energy expenditure, low income, and poor energy performance. Energy renovation, when designed inclusively, becomes a powerful tool to reverse these conditions — especially when paired with targeted subsidies and one-stop-shop advisory services for vulnerable households.

Moreover, reducing energy poverty through renovation promotes social cohesion, supports public health objectives, and contributes to just transition goals, especially in areas undergoing structural economic shifts (e.g. Western Macedonia).

### 3.2 Public Health Benefits

Energy renovation significantly contributes to improving public health outcomes, especially in countries like Greece, where temperature extremes, both summer heatwaves and cold winters, are intensifying due to climate change. Poorly insulated homes with outdated heating or cooling systems often expose occupants to indoor temperatures that are well outside the comfort zone, contributing to a range of health problems.

Long-term exposure to cold or damp indoor conditions has been linked to increased risks of **cardiovascular disease, asthma, respiratory infections, and mental health conditions** such as anxiety and depression. The elderly, children, individuals with chronic illnesses, and low-income populations are especially vulnerable.

According to the **World Health Organisation (WHO)**, around **100,000 premature deaths per year in Europe** are linked to poor housing conditions, including inadequate heating and insulation. In Greece, households in **classes F and G** often face **indoor winter temperatures below 18°C**, particularly in mountainous or island regions where heating is expensive or unreliable.

Energy renovation, including insulation, double glazing, and efficient HVAC systems, improves thermal comfort, reduces dampness and mould, and enhances indoor air quality. These improvements result in measurable reductions in hospital admissions, medication use, and heating-related mortality during the winter months.

Moreover, lowering the incidence of illness reduces **public healthcare expenditure**, while enabling individuals, especially older adults, to live independently for longer. These co-benefits are significant in regions facing demographic ageing and overstretched local health systems. As such, building renovation should be viewed not just as a climate measure, but also as a **preventive public health investment**.

Renovation programmes can empower vulnerable groups if designed inclusively. Recommendations include:

- Deploying One-Stop Shops (OSS) at the municipal level.
- Providing free energy audits and technical assistance.
- Designing programmes that simplify applications for the elderly and the digitally excluded individuals.

### 3.3. Equity and Social Justice

Energy renovation is a powerful lever for advancing equity and inclusion in the built environment. In Greece, a significant proportion of vulnerable households — including renters, single-parent families, the elderly, and unemployed individuals — reside in buildings with low energy performance (often classified as EPC classes E, F, or G). These homes typically lack proper insulation, rely on expensive heating fuels, and result in **disproportionate energy spending** relative to household income.

Energy poverty, in this context, is not only a technical problem but also a **social justice issue**. Without targeted support, renovation programmes risk reinforcing existing inequalities by favouring wealthier households who have the financial and administrative capacity to invest.

To address these disparities, renovation strategies must incorporate:

- **Prioritisation of low-income and high-risk households**, especially in regions with high energy poverty indicators;
- **100% grants or zero-interest loans** for eligible groups;
- **Free access to advisory services**, such as One-Stop Shops (OSS);
- Tailored solutions for **tenants, multi-owner buildings, and rural dwellings** that often fall through the cracks of existing programmes.

Moreover, embedding **gender-sensitive** and **accessibility-aware** approaches into renovation design ensures that the benefits are equitably distributed across society. For example, elderly individuals with mobility challenges or single-woman-led households face particular barriers to participation.

Inclusive renovation policies are also central to the **EU's Just Transition objectives** and the **European Pillar of Social Rights**, which call for access to essential services, including housing, to be universal and fair. By aligning renovation efforts with social equity principles, Greece can ensure that no one is left behind in the shift to a net-zero building stock.

## 4. Economic Benefits

### 4.1 SME Participation and Competitiveness

Small and medium-sized enterprises (SMEs), particularly those in the construction and materials sectors, play a crucial role in the current wave of renovation. However, lack of access to capital is a key barrier:

- SMEs report that **existing support schemes are inadequate** and **administratively complex**
- A low-interest loan programme piloted in Greece proved effective, particularly because of:
  - Independent evaluation
  - Complementarity with other programmes
  - Exclusion from the managing authority from the approval process

There is a strong case for **expanding such financial mechanisms**, particularly with risk-sharing tools and loan guarantees.

### 4.2 Job Creation

Renovation programmes support high-quality, local employment in:

- Construction and skilled trades
- Energy audits and architectural design
- Manufacture of insulation materials, windows, HVAC systems

A national renovation wave could support **thousands of jobs** across Greece, particularly in **regions undergoing energy transition**, such as Western Macedonia and Megalopoli.

### 4.3 Local Economic Growth

Energy renovation can:

- **Reduce energy imports**, improving the trade balance.
- Increasing **property values** and stimulating the real estate sector.
- Improve **fiscal revenue** via VAT and employment taxes.

Case studies in Greece suggest that energy renovation investments can yield a return of more than €2 for every €1 spent, considering both direct and indirect economic impacts.

## 5. Case Examples from Greek Regions

Greece's energy renovation needs are not evenly distributed; they reflect the country's regional diversity in terms of geography, climate, socio-economic vulnerability, and housing conditions. Regional disparities, from the mountainous interior and ageing urban centres to remote islands with weak energy infrastructure, shape both the urgency and the type of interventions required. Case examples from different NUTS 2 regions reveal the extent to which structural inequalities, demographic pressures, and climatic extremes intersect with energy poverty and poor building performance. By examining specific areas, such as Western Greece, Central Macedonia, and the Ionian Islands, this section highlights the value of targeted, place-based renovation strategies that take into account local needs and capacities. These cases illustrate how renovation can function not only as a climate response but also as a vehicle for inclusive regional development.

Region	Energy Poverty Indicator	Key Challenges
Western Greece	30.3% IHAW, 53.3% arrears	Cold winters, old housing, high unemployment
Ionian Islands	63.3% arrears	Diesel-powered islands, expensive cooling, seasonal income
Central Athens	Urban heat, migrant and elderly populations	Multi-family buildings, low-income renters
Western Macedonia	16.7% unemployment, 21.8% energy poverty	Transition from lignite, outdated housing stock

## 6. Conclusion and Policy Implications

Energy renovation represents a multifaceted opportunity for Greece, one that extends far beyond environmental performance. As this brief demonstrates, investing in the country's ageing building stock can yield profound and lasting societal benefits, ranging from reducing energy poverty and enhancing public health to stimulating employment and promoting social justice. These benefits are not theoretical; they are supported by growing evidence from national and European studies, and their relevance is magnified in the face of persistent inequality, regional disparities, and rising energy insecurity.

For energy renovation to become a true enabler of inclusive and sustainable development, coordinated action is required across all levels of governance. Public authorities have a key role to play in setting clear regulatory frameworks, simplifying access to funding, and ensuring that renovation programmes prioritise those in greatest need. Financial institutions must develop instruments that reflect the unique characteristics of renovation investments, such as long payback periods and non-monetary co-benefits, while also facilitating blended finance models that combine public and private resources.

Civil society and industry stakeholders alike must contribute by raising awareness, supporting behavioural change, and ensuring the local anchoring of renovation initiatives. This is particularly relevant for remote regions and communities experiencing the highest levels of vulnerability. The social and economic benefits of energy renovation, including better health, lower energy bills, more comfortable homes, and stronger local economies, are substantial and well within reach, but only if backed by decisive, inclusive, and well-financed policy action.

In sum, energy renovation is not merely a technical solution to climate obligations; it is a social contract with future generations. Greece now stands at a pivotal moment to translate this potential into impact, ensuring that the transition to a zero-emission building stock benefits all segments of society and leaves no one behind.