Towards a just building renovation transition in Hungary

Recommendations for identifying worst-performing buildings in the National Building Renovation Plan

JustReno

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Executive summary

This deliverable was initially intended to assess Hungary's Social Climate Plan (SCP) using a predefined evaluation framework. As Hungary has not yet developed its SCP, the originally planned assessment could not be undertaken.

In light of this, the scope of the deliverable was redirected towards the National Building Renovation Plan (NBRP). At the time of preparing this report, however, the draft Hungarian NBRP had not been published. While certain elements of the draft have been shared and discussed in professional settings, the complete version is not yet publicly accessible.

This deliverable therefore aims to provide considerations and recommendations to support the development of the Hungarian NBRP, with a particular focus on the identification of worst performing buildings (WPBs) and their overlap with vulnerable households. The analysis draws primarily on the Hungarian Central Statistical Office's building stock database and complementary evidence from a representative survey of property owners in Budapest. These data sources were originally analysed within the JustReno project to support the development of the municipal approach methodology, which helps local authorities identify WPBs and vulnerable households. However, the findings derived from these datasets also offer valuable insights for national level planning. This report brings together these findings and highlights their relevance for the preparation of Hungary's future NBRP and SCP.

The results show that Hungary's worst-performing buildings are overwhelmingly concentrated in villages and smaller towns and are predominantly single-family houses. Nearly 80% of all WPBs are located in rural areas and approximately 78% are single-family houses, indicating that the Hungarian WPB challenge is primarily a rural single-family housing issue.

The analysis also reveals significant differences between building types and heating systems. Panel buildings are largely absent from the worst-performing segment of the housing stock in Hungary, reflecting the combined effects of favourable building physics characteristics, district heating and previous renovation programmes. In contrast, around 90% of dwellings relying exclusively on wood-based heating belong to the worst-performing categories. The findings further show that social vulnerability and poor building performance are strongly correlated but do not fully overlap. While vulnerable households are more likely to live in inefficient buildings, a substantial share of households of higher socioeconomic status also occupy worst-performing dwellings.

Based on these findings, the report argues that the NBRP should maintain a strong focus on the identification and renovation of WPBs while ensuring consistency with policies targeting vulnerable households. The effective implementation of the NBRP will require close coordination with other strategic frameworks, particularly the SCP and the National Energy and Climate Plan (NECP), as well as stronger involvement of municipalities and local stakeholders. A successful renovation strategy should combine robust targeting, predictable financing, broad public participation and strong national–local coordination to maximise both energy and social benefits.

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Introduction

1.1. Purpose of the study

This study was prepared within the framework of the EUKI JustReno project, which aims to support the development of socially fair building renovation policies. The project focuses on ensuring that the transition towards a more energy-efficient and decarbonised building stock does not leave vulnerable households behind and that renovation policies adequately address energy poverty, affordability constraints and unequal access to support.

The original objective of this deliverable was to assess Hungary's Social Climate Plan (SCP) against a predefined evaluation framework. In particular, the assessment was intended to examine how the social vulnerability dimension of building renovation is addressed in the SCP, starting with the definition and identification of energy poverty and extending to the measures proposed to alleviate it. The analysis was also intended to consider whether the planned policies and support schemes would effectively reach vulnerable households and enable them to participate in building renovation programmes.

As Hungary has not yet prepared an SCP, the planned assessment could not be carried out. Consequently, the focus of the deliverable shifted towards the National Building Renovation Plan (NBRP). However, the Hungarian draft NBRP was also not published in time for the preparation of this report. Although certain elements of the draft have been presented and discussed in professional forums, the full document has not yet been made publicly available.

As a result, rather than evaluating an existing strategic document, this report formulates recommendations for the preparation of the Hungarian National Building Renovation Plan, with a particular focus on socially fair renovations. Particular attention is given to the identification of worst-performing buildings (WPBs) and to assessing the extent to which they overlap with vulnerable households.

Given the central role of WPBs in the Energy Performance of Buildings Directive (EPBD) framework, their accurate identification is essential for designing effective renovation policies. A better understanding of the overlap between WPBs and vulnerable households can help ensure that renovation measures and financial support reach those most in need, while contributing to the alleviation of energy poverty and a socially fair renovation transition.

1.2. Policy background

Under the recast Energy Performance of Buildings Directive, Member States are required to prepare National Building Renovation Plans outlining their pathway towards a decarbonised building stock by 2050. These plans typically include an assessment of the national building stock, the identification of worst-performing buildings, renovation targets and trajectories, financing needs, governance arrangements, and measures to accelerate deep renovation and the deployment of clean heating technologies.

In the residential sector, the EPBD requires Member States to reduce the average primary energy use of the residential building stock by at least 16% by 2030 and by 20–22% by 2035, with at least 55% of these reductions achieved through the renovation of the worst-performing buildings, defined as the bottom 43% of the national residential building stock in terms of energy performance measured by total primary energy consumption.

At the same time, the SCP, prepared under the Social Climate Fund framework, is intended to support vulnerable households, vulnerable micro-enterprises and transport users affected by the costs of the green transition. Rather than focusing primarily on short-term compensation, the Fund is intended to support structural transformations that permanently reduce energy demand, fossil fuel dependency and households' exposure to rising energy prices through measures such as building renovation and clean heating investments.

As a result, the two plans are deeply interdependent. The NBRP defines what kind of building renovations and investments are necessary, while the SCP can provide part of the financial and social support needed to implement these measures among low-income and vulnerable groups. One of the strongest links between the two frameworks is the overlap between worst-performing buildings and vulnerable households. In many cases, households most exposed to energy poverty are also those living in poorly insulated, inefficient buildings with high heating demand and outdated fossil fuel-based heating systems. Both plans therefore rely on similar data sources, methodologies and indicators, such as energy performance certificate (EPC) databases, census and household income data, energy poverty indicators, and local vulnerability assessments.

The National Building Renovation Plan and the Social Climate Plan are expected to be coherent not just with each other but with other national strategic frameworks, including the National Energy and Climate Plan (NECP).

Increasingly, EU policy emphasises structural solutions — deep renovation, electrification, renewable heating and energy demand reduction — as the most effective way to simultaneously address climate goals, energy security and social vulnerability.

This connection is particularly relevant in Hungary, where a large share of the residential building stock consists of poorly performing single-family houses with high energy demand, and where energy poverty remains a significant challenge. In practice, the same groups that are most vulnerable to rising energy prices are often those living in the least efficient buildings. Many households are currently shielded from higher energy costs through Hungary's long-standing residential energy price-cap mechanism, which provides some of the lowest household utility prices in Europe. However, this system also reduces the economic incentive for energy efficiency improvements and does not address the structural problems associated with inefficient buildings and high underlying specific energy demand.

This makes the identification of vulnerable households and worst-performing buildings particularly important: the design of renovation support schemes and the allocation of EU and national funding should be closely coordinated across the two plans. For this reason, the Social Climate Plan can be understood not as a separate policy instrument, but as an important social and financial pillar supporting the successful implementation of the National Building Renovation Plan.

1.3. Methodology

This analysis draws on two main data sources. The first is the database developed by the Hungarian Central Statistical Office (HCSO). Using the 2022 census, HCSO estimated the energy performance of the entire Hungarian housing stock. Since the questionnaire on dwellings in the census contained only data on physical dwelling characteristics and not actual energy ratings, HCSO linked EPC records from the Lechner Knowledge Centre to census data through address matching and used these matched observations to estimate the most likely energy category for all dwellings. This resulted in a nationally consistent, model-based energy classification covering the entire residential housing stock.[1]

The second is the CARES database,[2] a representative sample of 2,009 property owners in Budapest from 2023 containing detailed information on the physical characteristics of dwellings, the socioeconomic characteristics of households, and renovation-related attitudes and experiences.

The HCSO methodology estimates building energy performance based on non-renewable primary energy consumption, in line with the current Hungarian EPC framework. However, the revised EPBD requires the identification and monitoring of worst-performing buildings based on the annual average primary energy consumption (total) per square metre. As a result, the methodology applied in this analysis is not fully aligned with the EPBD approach and can be applied for monitoring purposes with some limitations. The discrepancy may be particularly significant for buildings relying heavily on renewable energy sources, especially biomass-based heating, where low non-renewable primary energy values can mask high overall energy consumption. Consequently, the results presented should be interpreted as a useful approximation of the worst-performing parts of the building stock rather than a direct representation of the EPBD-defined WPB segment.

1. We thank Áron Horváth, PhD (Eltinga), and the colleagues of the Hungarian Central Statistical Office for their contribution to the creation of the database.
2. Metropolitan Research Institute. (2024). Budapest CARES (Climate Agency for Renovation of homes). Városkutatás Kft. https://mri.hu, CARES - Climate Agency for Renovation of homes

2 JustReno

Identification of worst-performing buildings and their overlap with vulnerable households

2.1. Identification of worst-performing buildings

According to the data presented by the Hungarian Central Statistical Office, 47% of Hungarian dwellings and residential buildings fall into the H–I energy categories, which can be treated as the worst-performing segment of the stock. If the F-G categories are also considered, more than two-thirds of the national residential stock is in poor energy condition.

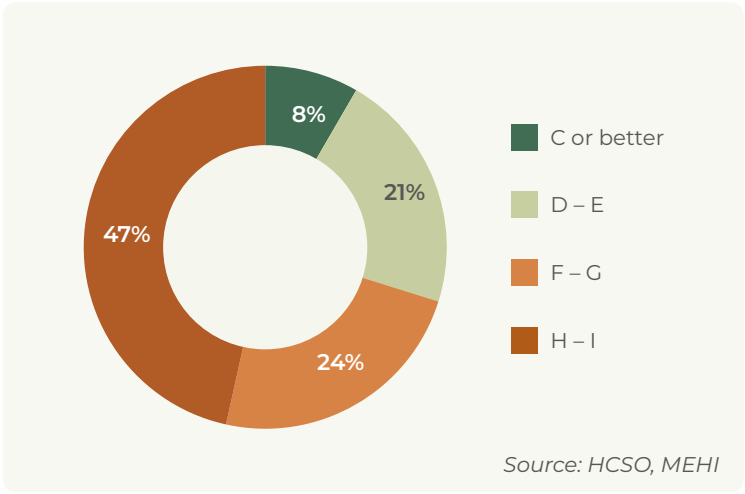

Figure 1: Distribution of energy performance ratings in the Hungarian housing stock

Territorial dimension

The strongest territorial pattern is the clear deterioration of building energy performance as settlement size decreases. In Budapest, 23% of dwellings are in the H–I categories, and the share is very similar in county seats and cities with county rights, at 22%. In smaller towns, however, the share rises to 53%, while in villages it reaches 76%. At the other end of the scale, the share of dwellings rated C or better is 14% in Budapest, 13% in county seats, 6% in smaller towns, and only 3% in villages. This suggests that a renovation programme targeting the worst-performing stock must be capable of reaching villages and smaller towns, otherwise it will miss the largest part of the problem.

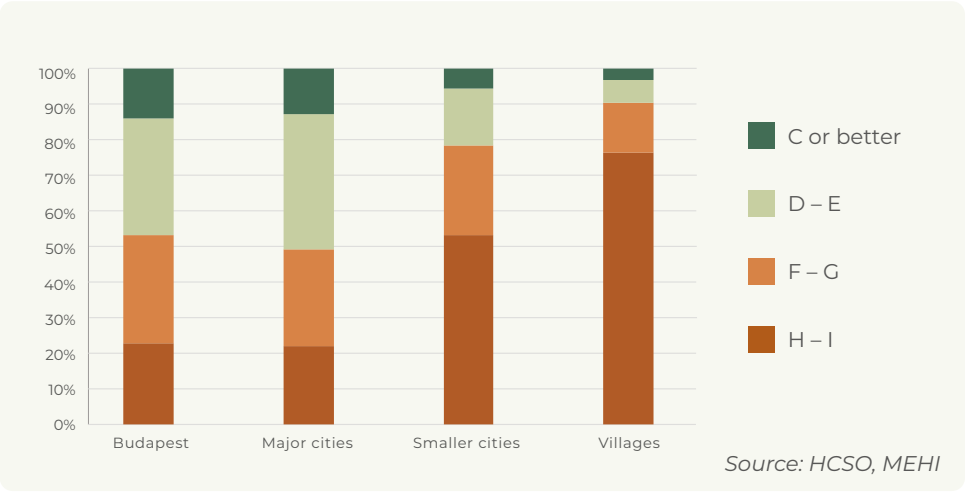

Figure 2: Energy rating distribution of occupied dwellings (every dwelling type)

Dwelling type dimension

At the national level, the worst-performing building stock is overwhelmingly composed of single-family houses, which account for 78% of all worst-performing dwellings.

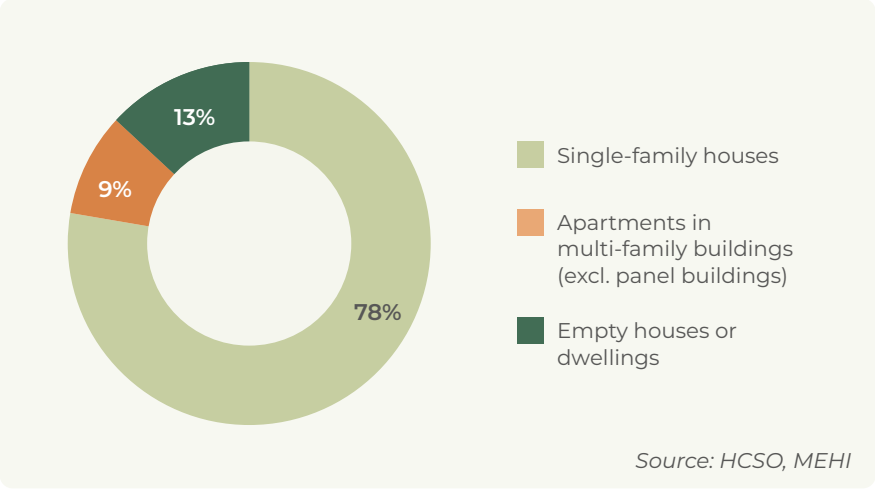

Figure 3: Dwellings in Hungary with energy rating H-I, by building type

Combined analysis according to settlement and dwelling types

The size of the below pie charts is proportional to the number of H–I dwellings in each settlement category. The vast majority of Hungary's worst-performing homes are located in villages and smaller towns. Together, these two settlement types account for nearly 80% of all H–I dwellings, and the overwhelming majority of them are single-family houses.

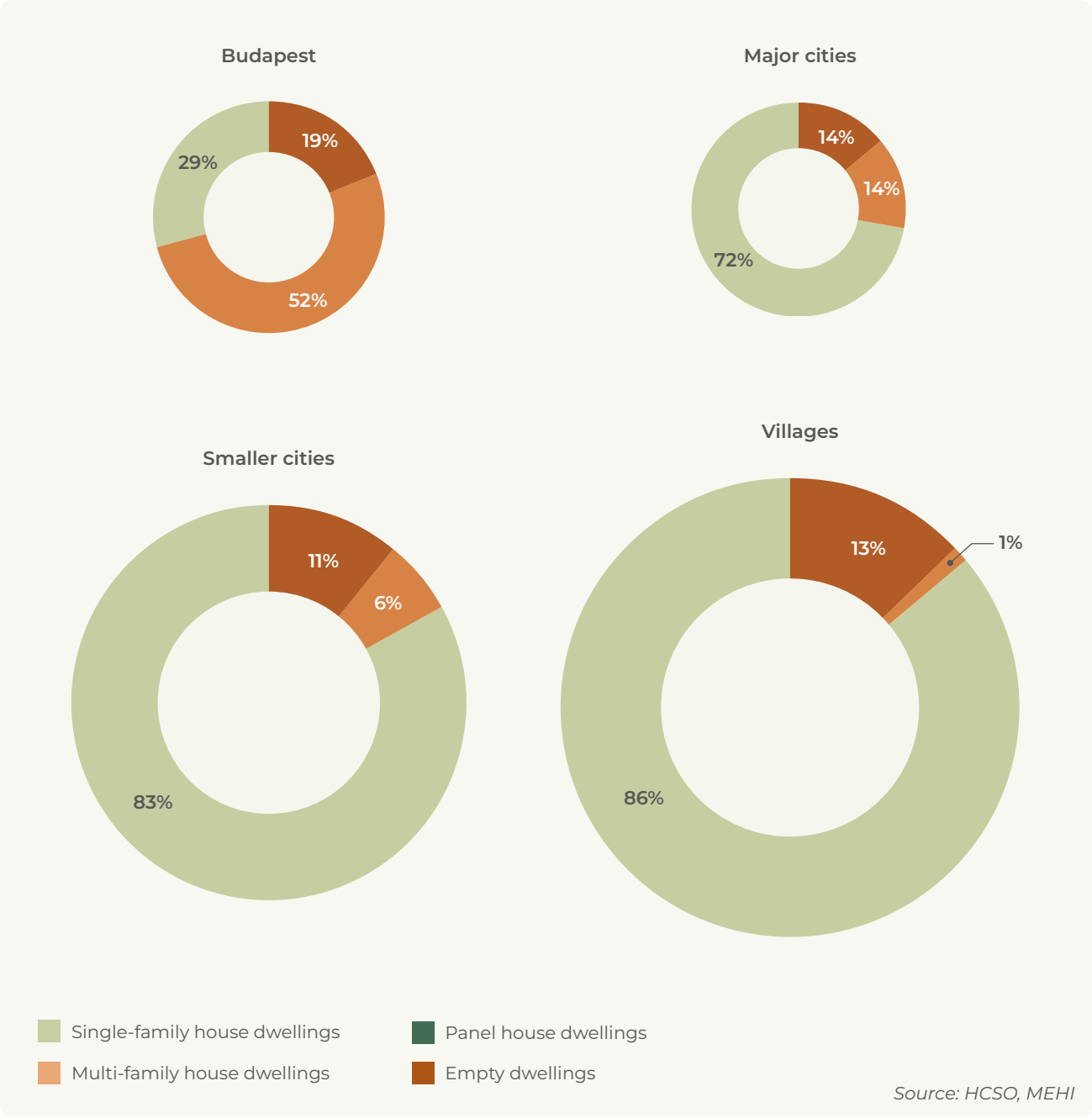

Figure 4: Dwellings in Hungary with energy rating H-I, by settlement type

Budapest presents a markedly different picture. While only a relatively small share of all H–I dwellings is located in the capital, more than half of them are condominium apartments.

	Budapest	Larger cities	Smaller cities	Villages	TOTAL
Single-family houses	64,776	158,167	615,165	831,303	**1,669,411**
Apartments in multi-family buildings (excl. panel buildings)	117,137	30,354	42,981	7,517	**197,989**
Apartments in panel buildings	214	310	1 710	207	**2,441**
Empty houses or dwellings	44,035	29,860	77,967	129,502	**281,364**
Non-residential buildings	193	296	665	276	**1,430**
Total	**226,355**	**218,987**	**738,488**	**968,805**	**2,152,635**

Source: HCSO, MEHI

Table 1: H-I category dwellings, by dwelling and settlement type

According to the table above, single-family houses account for approximately 1.67 million of Hungary's 2.15 million H–I dwellings. The largest subgroup is village single-family houses, accounting for 39% of all H–I dwellings, followed by single-family houses in smaller towns, which account for 29%. Together, village and small-town single-family houses make up more than two-thirds of the worst-performing segment.

The data also highlights the importance of empty dwellings. Around 281,000 H–I category units are classified as vacant, a surprisingly large number that may partly reflect data limitations. In Budapest and other cities, for example, some of these dwellings may be used as offices, medical practices or short-term rentals rather than being genuinely vacant. This suggests that not all units classified as vacant should automatically be considered targets for energy renovation programmes, and that broader housing and urban policy considerations may also be relevant.

Village family houses	38.6%
Family houses in smaller cities	28.6%
Family houses in larger cities	7.3%
Empty houses or dwellings in villages	6%
Multi-family building apartments in Budapest (excl. panel buildings)	5.4%
Other	14%

Source: HCSO, MEHI

Table 2: H-I category dwellings, by dwelling type

Deeper analysis of the different dwelling types

Single-family houses

Nationally, 66% of single-family houses are in the H–I categories. In villages, this proportion is especially high: 77% of occupied single-family houses fall into H–I, compared with 66% in smaller towns, 46% in county seats, and 38% in Budapest. This is explained not only by the age and technical quality of the stock, but also by structural reasons: single-family houses have a less favourable ratio of exposed surface area to heated volume than multi-apartment buildings. Many were built before energy efficiency became a relevant design or regulatory consideration, often with uninsulated walls, weak windows, outdated ceilings or roofs, and inefficient heating systems.

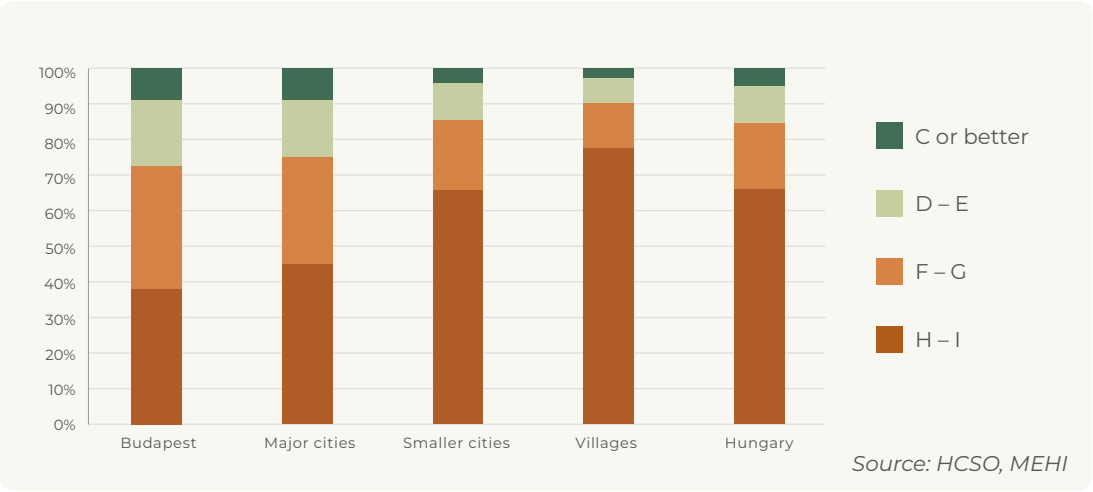

Figure 5: Energy rating distribution of occupied single-family building dwellings

Multi-apartment buildings (excluding panels)

Non-panel condominium flats account for a smaller share (9%) of the H–I stock nationally, but they are important in Budapest. There are around 226,000 H–I dwellings in Budapest, of which 117,000 are non-panel condominium flats, 65,000 are single-family houses and 44,000 are empty dwellings or houses. This means that although Budapest is not the main territorial concentration of worst-performing buildings, the deep renovation of Budapest condominiums could still deliver a significant improvement.

Moreover, a targeted renovation programme in Budapest is clearly justified, as nearly one-quarter of all Budapest dwellings fall into the H–I categories. This segment often faces multiple challenges – social vulnerability, low housing comfort and poor energy performance – all of which underline the need for comprehensive renovation efforts in the capital.

Targeting renovation support in Budapest is, however, considerably more challenging, as the social and economic composition of the city is far more heterogeneous than in most other regions of the country. Households with very different income levels, educational backgrounds and social characteristics often live side by side within the same building or even the same staircase. Importantly, many high status, higher income households also reside in worst performing buildings, which makes it difficult to apply simple socioeconomic targeting criteria in the capital.

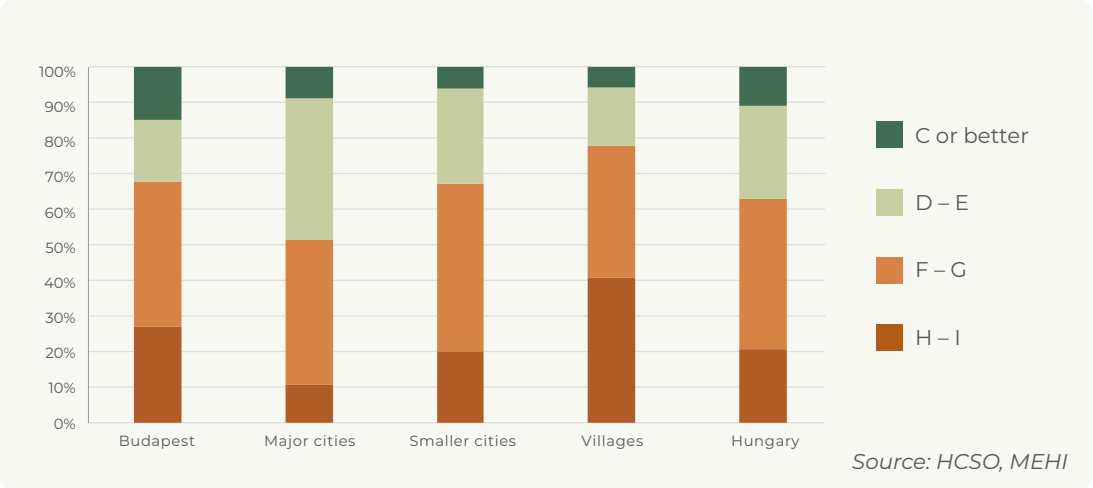

Figure 6: Energy rating distribution of occupied multi-family building apartments (excluding panel buildings)

Panel buildings

Panel flats are in a significantly better position than both single-family houses and traditional condominium apartments. In Budapest, only around 0.1% of panel flats fall into the H–I categories, while nationally the share remains below 0.5%. Approximately 97% of panel flats in Budapest and 90% nationally achieve at least an E rating. This favourable performance can be attributed to several factors. First, panel buildings benefit from a more advantageous surface-to-volume ratio than detached houses, resulting in lower heat losses. Second, many panel buildings are connected to district heating systems, which currently enjoy favourable primary energy and CO_2 conversion factors, particularly in Budapest. Finally, panel buildings have been the primary target of residential renovation programmes since the early 2000s, and it is estimated that 44% of the stock has undergone some level of energy refurbishment over the past two decades.[3] Together, these factors help explain why panel buildings are largely absent from the worst-performing segment of the Hungarian housing stock.

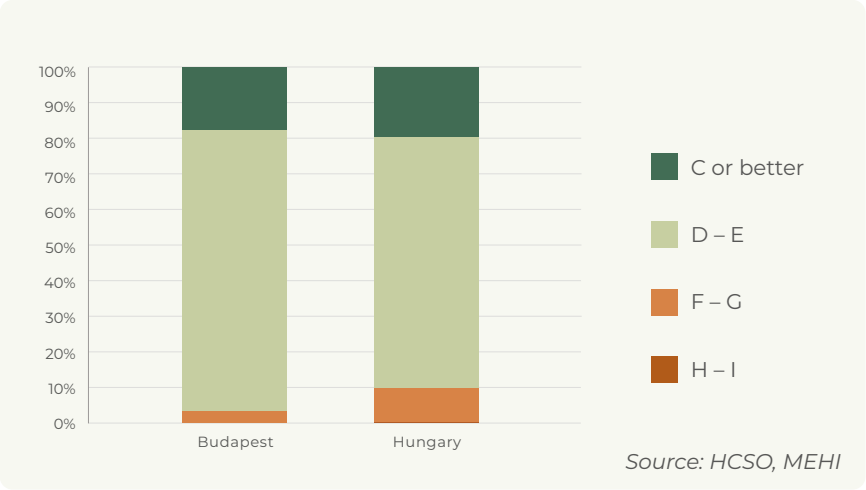

Figure 7: Energy rating distribution of occupied panel-building apartments in Budapest and nationally

3. Long-Term Renovation Strategy of Hungary (2021), available at the Commission website.

Heating

The heating-related analysis shows a very strong connection between wood-based heating and poor energy performance. Nationally, 89% of dwellings heated with wood fall into the H–I categories, compared to 41% among dwellings heated only with network gas. Mixed gas-and-wood heating also shows a very high share of H–I buildings, at 68%. This is a striking result, because it suggests that wood heating in Hungary is typically linked not to modern biomass technologies, but to outdated solid-fuel heating systems in older, poorly insulated buildings. Electrically heated dwellings and "other" fuels also show relatively poor energy performance, with more than half of them in the H–I categories.

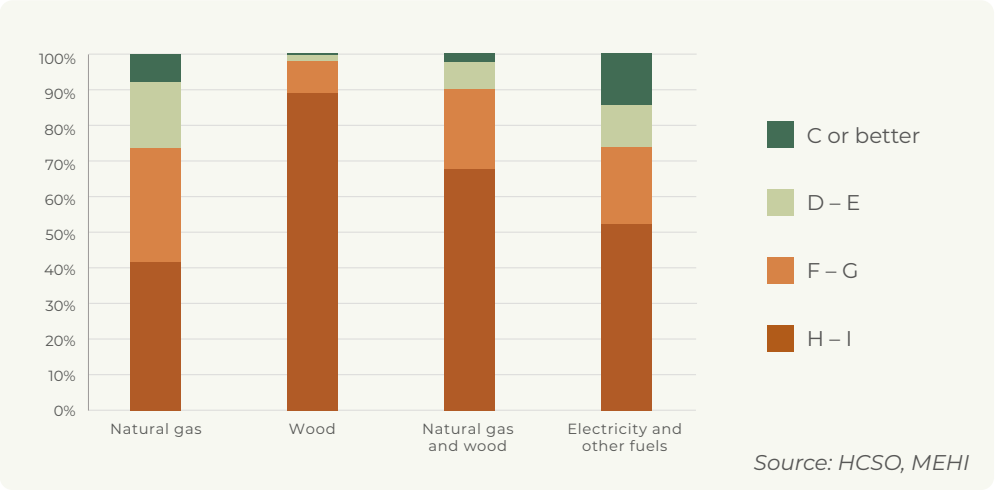

Figure 8: Energy rating distribution of dwellings in Hungary, by heating fuel

The village-level picture is even more extreme. In villages, more than 90% of wood-heated dwellings belong to the H–I categories. Even gas-heated dwellings perform much worse in villages than nationally: around 71% of village homes heated with network gas are H–I. This indicates that the problem is not only the fuel type itself, but the broader quality and age of the rural building stock. In many rural settlements, even homes connected to the gas network remain energetically very poor because of weak insulation, outdated windows, old roofs and inefficient heating systems. The data therefore suggests that simply replacing heating systems without deep renovation would have limited impact in many rural areas.

2.2. Assessing the overlap between worst-performing buildings and vulnerable households

The analysis gains an additional social dimension by examining not only the energy performance of buildings, but also the characteristics of the households living in them.

Since direct income data is not available in the dataset, social vulnerability can only be approximated using proxy indicators, available in the 2022 HCSO census. As a first step, we examine the relationship between occupational groups (ISCO categories) and building energy performance. The results reveal a clear socioeconomic gradient. Among households in higher-skilled occupational groups, around 31% live in H–I dwellings. This share rises to approximately 49% among mid-skilled groups, and reaches 58% among households in lower-skilled occupations or without employed members. These findings indicate a strong correlation between social disadvantage and poor building energy performance. At the same time, the overlap remains incomplete, as a substantial share of higher-skilled households also live in poor-performing buildings, especially in more urbanized settlements.

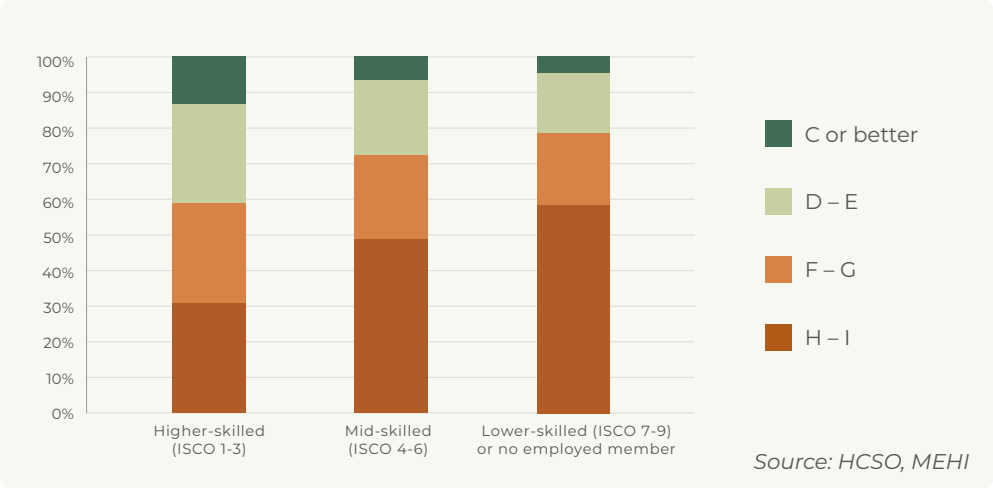

Figure 9: Energy rating distribution by household's occupational status

To identify vulnerable households more systematically, we constructed a composite vulnerability indicator. A household is classified as vulnerable if at least one of the following conditions applies: low employment intensity, membership in lower-skilled occupational groups (ISCO categories), the presence of a resident with a disability, or the presence of a resident with severe activity limitations. This approach makes it possible to analyse the overlap between social vulnerability and building energy performance. In the following section, vulnerable households are examined across different property-value categories to better understand the distribution of vulnerability within the housing stock.

The strongest overlap appears when vulnerability is combined with low housing value. Among vulnerable households living in homes worth less than HUF 30 million (~€80,000), around 66% live in H–I category dwellings. By contrast, among vulnerable households living in homes valued above HUF 100 million (~€265,000), the H–I share falls to around 8%. This indicates that low-value housing is a strong predictor of poor energy performance, especially when combined with social vulnerability. However, these categories cannot be treated as fully interchangeable. Even in the most vulnerable low-value segment, one-third of households do not live in H–I buildings. Therefore, vulnerable households and worst-performing buildings overlap significantly, but not perfectly.

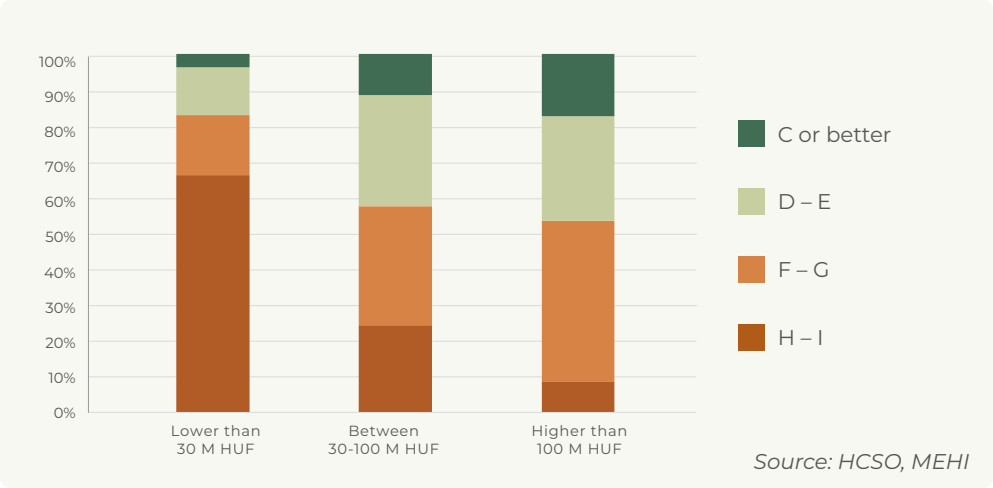

Figure 10: Energy rating distribution of dwellings of vulnerable households, by estimated dwelling value

This is a particularly important policy conclusion. It suggests that renovation programmes cannot rely exclusively on either technical criteria or social criteria alone. If programmes target only the worst-performing buildings, some socially vulnerable households may be missed. Conversely, if programmes target only vulnerable households, a substantial amount of technically poor building stock may remain outside intervention schemes. The analysis therefore supports the idea of combined targeting mechanisms that preferably integrate energy performance, settlement type, heating system and social indicators simultaneously.

2.3. Evidence from Budapest: WPBs and energy poverty

Additional evidence comes from the CARES database, a representative sample of 2,009 flat and house owners in Budapest of 2023. The Metropolitan Research Institute (MRI) examined the relationship between WPB status and three commonly used indicators of energy poverty:

- **Energy costs exceed 15% of household income**
- **Utility bill arrears within the past 12 months**
- **Ability to keep the dwelling adequately warm during winter**

The strongest relationship was found in relation to utility bill arrears. Households living in worst-performing buildings were almost three times more likely to experience arrears than other households. The relationship was statistically significant across both multi-family buildings and single-family houses.

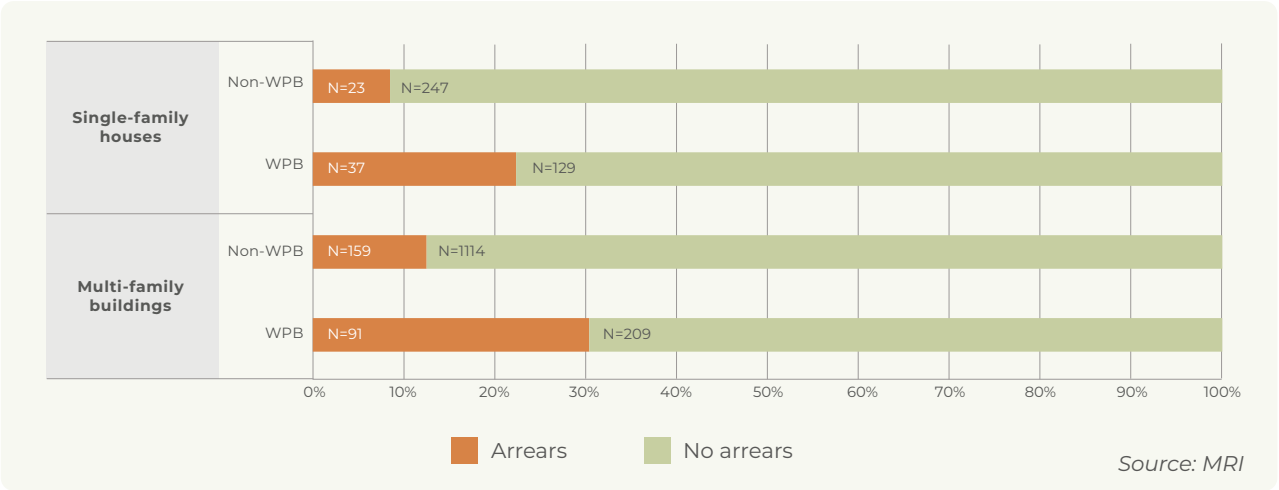

Figure 11: Utility bill arrears within the past 12 months by WPB

The analysis also found a significant relationship between WPB status and the inability to keep homes adequately warm during winter. However, this effect was primarily driven by single-family houses. Among households living in multi-family buildings, the relationship was much weaker and not statistically significant. By contrast, residents of single-family houses classified as WPBs were more than twice as likely to report difficulties maintaining adequate indoor temperatures.

4. Metropolitan Research Institute. (2024). Budapest CARES (*Climate Agency for Renovation of homes*). Városkutatás Kft. https://mri.hu, CARES - Climate Agency for Renovation of homes

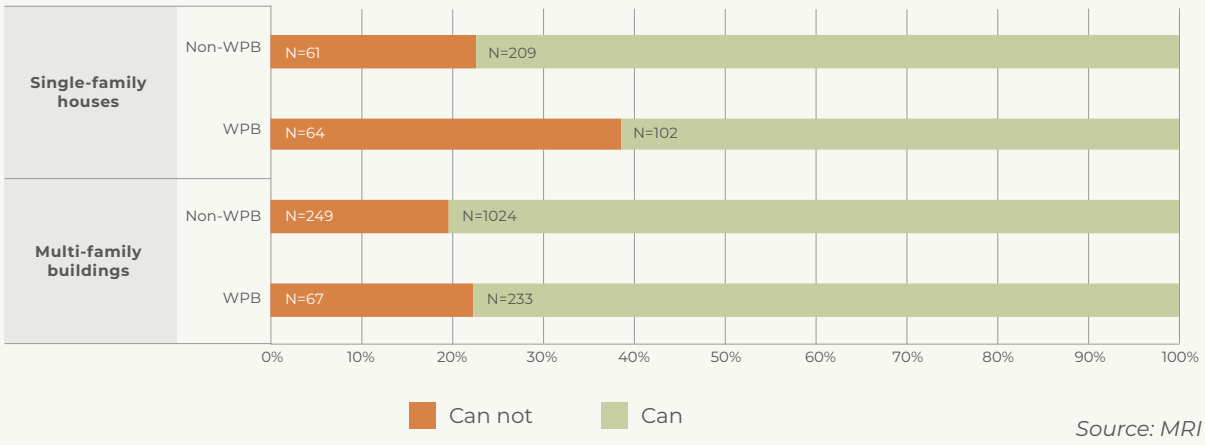

Figure 12: Ability to keep the dwelling adequately warm during winter by WPB

Interestingly, no statistically significant relationship was found between WPB status and the indicator measuring whether energy costs exceeded 15% of household income. At first sight, this result appears counterintuitive. However, further analysis reveals that households living in WPBs tend to occupy smaller dwellings and often limit energy consumption in response to affordability constraints. Consequently, actual expenditure levels may not fully reflect underlying energy needs or building performance.

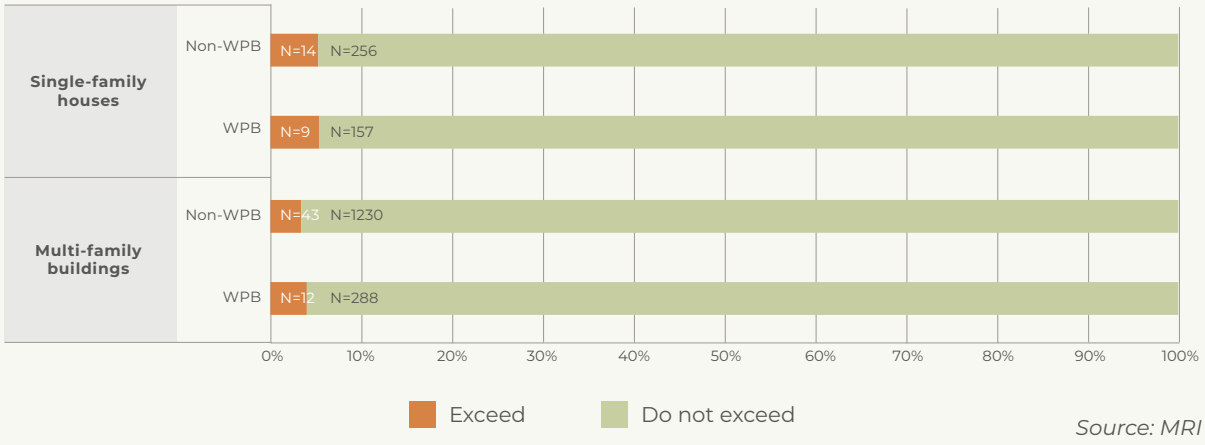

Figure 13: Energy costs exceed 15% of household income by WPB

2.4. Key findings

The analysis reveals a strong territorial concentration of Hungary's worst-performing buildings. Nearly 80% of all WPBs are in villages and smaller towns, and the overwhelming majority of them are single-family houses. In other words, the WPB challenge in Hungary is primarily a rural housing issue rather than an urban one. Any renovation strategy that aims to meet the EPBD targets must therefore be capable of effectively reaching rural areas and the single-family housing stock.

The situation in Budapest and larger cities is markedly different. Although the share of WPBs is substantially lower (about 25% of the capital's housing stock) than in rural areas, a significant number of worst-performing dwellings are in multi-family buildings. In Budapest alone, approximately 117,000 condominium apartments fall into the WPB category. This suggests that while the national renovation agenda should primarily focus on rural single-family houses, urban apartment buildings should not be overlooked, particularly given their scale and the challenges associated with collective decision-making and financing.

One of the most striking findings concerns panel buildings. From an EPBD perspective, panel buildings fall predominantly outside the WPB segment. This means that panel renovation programmes do not primarily serve the WPB related targeting obligations of the directive. However, they can still be renovated within the non WPB segment, where Member States retain broad flexibility to pursue additional policy objectives – including energy savings, comfort improvements, system modernisation, and urban or social policy goals.

The analysis also highlights a strong relationship between heating type and building performance. Around 90% of dwellings relying exclusively on wood-based heating fall into the WPB category. This finding indicates that firewood use in Hungary is typically associated not with modern biomass technologies, but with older, poorly insulated buildings, outdated heating systems and resulting local air pollution. Consequently, policies addressing the decarbonisation of residential heating must be closely linked with deep renovation measures, particularly in rural areas.

The relationship between social vulnerability and building performance is more complex. Although lower-income and lower-status households are more likely to live in WPBs, the overlap is far from complete. A substantial share of higher-status households also occupy inefficient dwellings. This suggests that building performance alone cannot serve as a proxy for social vulnerability. Renovation support schemes should therefore combine technical and socioeconomic criteria rather than relying exclusively on either approach.

The findings also point to a significant affordability challenge. Approximately 1.4 million vulnerable households live in WPBs with a market value below HUF 30 million (~€80,000), and three-quarters of these dwellings are single-family houses. For many of these households, deep renovation is unlikely to be financially feasible without substantial public support. This underlines the importance of carefully targeting grants and social support mechanisms towards households facing both poor housing conditions and limited financial capacity.

Finally, the analysis suggests that the social profile of households living in WPBs differs considerably between Budapest and rural areas. While rural WPBs are more strongly associated with social disadvantage, urban WPBs often contain a more diverse mix of residents. As a result, policy instruments that work well in rural single-family housing may not be directly transferable to urban multi-family buildings. The NBRP should therefore adopt differentiated approaches for rural and urban contexts rather than applying a single, uniform targeting strategy across the entire housing stock.

3 JustReno

Governance

Effective implementation of the NBRP requires stronger coordination between national and local levels of governance. One of the key lessons emerging from the JustReno project is the existence of a significant gap between national planning processes and local realities. Local perspectives have so far had limited influence on the development of national strategies, while municipalities have traditionally focused on the renovation of public buildings rather than the residential sector.

The identification of worst-performing buildings should therefore not rely exclusively on national-level modelling and datasets. Municipalities possess valuable local knowledge on housing conditions, vulnerable neighbourhoods and social challenges, and should play a more active role in the identification and prioritisation of WPBs. The JustReno townhall meeting in May 2026 also highlighted the need for a shared understanding of the WPB concept and for a clearer definition of the role municipalities can play in supporting residential renovation.

To bridge the gap between strategic planning and implementation, governance arrangements should strengthen cooperation between national authorities, municipalities and other stakeholders, supported by clear responsibilities, robust monitoring systems and long-term policy stability. Particular attention should be given to municipalities above 45,000 inhabitants, which are required under the Energy Efficiency Directive to prepare local heating and cooling plans and could serve as key actors in the local implementation of renovation policies.

Discussions at the JustReno townhall meeting also highlighted several systemic challenges faced by municipalities in contributing to residential renovation. Many local governments reported that they already have well designed renovation concepts or even well-developed programme proposals but lack the financial resources and human capacity required for implementation. Limited staffing, high administrative burdens and, most importantly, the absence of stable, predictable funding streams constrain their ability to support households effectively.

Participants emphasised that municipalities should be more directly involved in national renovation schemes, as local governments hold the highest levels of public trust and possess the local knowledge needed to reach residents, identify vulnerable households and ensure that support is well targeted. Strengthening municipal involvement could therefore significantly improve programme uptake and the effectiveness of public spending.

At the same time, several municipalities noted that they are currently trying to address issues – such as the modernisation of gas based heating systems – that may not align with national strategic priorities and could even delay the implementation of the NBRP. This reflects a broader misalignment between local problem solving pressures and the long term decarbonisation pathway required under EU legislation, underscoring the need for clearer guidance and coordinated planning.

A key lesson emerging from the discussions is that technology and funding alone are insufficient. Successful renovation policies require awareness raising, one stop shop advisory services, social workers and well targeted support schemes. These are particularly important because surveys indicate that two thirds of households currently do not plan to undertake energy renovations – a striking mismatch compared to the actual condition of the housing stock, as earlier analysis showed that a substantial share of dwellings fall into the lowest energy performance categories. This highlights how misperceptions about building condition can significantly hinder renovation uptake.

At the JustReno townhall meeting, the representative of the Ministry of Energy also noted that post renovation maintenance and behavioural aspects are critical: even a fully renovated building can deteriorate rapidly if residents do not maintain key elements such as windows. This underscores the need for integrated approaches that combine technical upgrades with social and behavioural support.

Finally, as the EU no longer supports fossil fuel related investments – and such measures are also prohibited under state aid rules – the long term policy question is no longer whether buildings should be renovated, but how to ensure that renovation is carried out in a socially just and inclusive manner.

4 JustReno

Synergies with other strategic documents

The National Building Renovation Plan should not be implemented as a standalone policy instrument, but as part of a broader strategic framework supporting Hungary's energy, climate and social objectives. Strong synergies are particularly important because building renovation contributes simultaneously to reducing energy consumption, lowering greenhouse gas emissions, improving energy security and alleviating energy poverty.

Coherence between the NBRP and the SCP is essential, as the two instruments target closely related challenges from different perspectives. Beyond this, the NBRP should also be integrated into a broader strategic framework, ensuring consistency with the National Energy and Climate Plan, local Sustainable Energy and Climate Action Plans (SECAPs), heating and cooling plans, district heating development plans and renewable energy strategies. Such alignment can improve policy effectiveness, reduce fragmentation and ensure that national renovation objectives are supported by complementary measures at both national and local levels.

5 JustReno

Public consultation and representation

Public consultation is a critical component of the National Building Renovation Plan, as renovation policies affect millions of households and require broad social legitimacy. Consultation processes should go beyond formal written procedures and actively involve municipalities, civil society organisations, housing and energy poverty experts, construction sector stakeholders, energy agencies, social service providers, homeowner associations and citizens.

Consultations should not remain purely procedural exercises. Stakeholder feedback should be meaningfully reflected in the final NBRP, and authorities should explain how comments have been addressed. Following broad public consultations, thematic working groups could support the development of evidence-based policy options and implementation pathways. At the same time, we warn against repeating the shortcomings of previous consultation processes related to the NECP and Recovery and Resilience Plans, which were frequently criticised for being rushed, overly formal and insufficiently participatory.

In the Hungarian context, it is important to note that the legally mandated eight day consultation period for draft legislation is insufficient for meaningful public participation, particularly for a complex, cross sectoral strategic document such as the NBRP. The short timeframe limits the ability of stakeholders to analyse the proposal, formulate evidence based feedback and coordinate their positions. Given the scale and long term implications of the NBRP, a substantially longer and more transparent consultation process is essential to ensure broad legitimacy, improve policy quality and avoid the shortcomings observed in previous national consultations.

6 JustReno

Conclusion

The analysis demonstrates that the overlap between worst-performing buildings and vulnerable households is strongest in rural areas, where poor building quality and social disadvantage reinforce each other. As settlement size increases, this relationship becomes markedly more heterogeneous: in urban environments – and especially in Budapest – households with very different income levels, educational backgrounds, and labour market positions often live side by side, and a significant share of higher-skilled households also occupy WPBs.This means that while rural targeting can rely more strongly on the correlation between technical and social vulnerability, urban renovation policies require more nuanced, multidimensional approaches.

For national planning, the implications are clear. Hungary's WPB challenge is overwhelmingly a single-family house problem concentrated in villages and smaller towns, where deep renovation and heating system modernisation are essential to reduce energy demand and alleviate energy poverty and heating-related air pollution. At the same time, Budapest's condominium stock – although not the main territorial concentration of WPBs – still contains a substantial number of inefficient dwellings, and its socially mixed character makes simple socioeconomic targeting ineffective. Renovation support schemes must therefore differentiate between rural and urban contexts, combining technical, social and property-value indicators to reach the right households.

The governance analysis and workshop insights highlight that municipalities, while indispensable local actors, face significant structural constraints. Their mandates, capacities and resources to engage with the privately owned building stock are limited, and they often lack the tools, data access and institutional capacities needed to systematically identify WPBs or support owners through complex renovation processes. Strengthening municipal roles will require not only clearer responsibilities but also targeted capacity-building, improved data-sharing mechanisms and governance models that enable municipalities to be more active in supporting privately owned residential renovation.

A socially just and effective National Building Renovation Plan will depend on recognising these territorial differences, governance constraints and the imperfect overlap between technical and social vulnerability. The NBRP must also be embedded within a coherent strategic ecosystem: alignment with the Social Climate Plan, the National Energy and Climate Plan, local SECAPs and heating and cooling plans will ensure that renovation contributes effectively to Hungary's climate, energy security and social objectives. Public consultation should be meaningful, transparent and significantly longer than the legally mandated minimum, given the scale and long-term implications of the NBRP.

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