



Actions to Mitigate Energy Poverty
in the Private Rented Sector

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1

EXECUTIVE SUMMARY

This report examines the structural barriers preventing investment in energy efficiency measures in Europe's Private Rented Sector (PRS) housing stock. The analysis is undertaken with reference to the broader trends in private renting, the regulatory landscape that currently exists, and the need to reduce social vulnerability and income poverty more generally. An introduction detailing historical and geographical trends in Europe, using case studies and elaborating upon research and policy analysis from previous ENPOR project reports, serves to provide the starting point of the review.

Following desk-based reviews of academic and grey literature, we identified Financial, Political/Regulatory, Social, and Geographical factors as key barriers to the implementation of energy efficiency policies in the PRS, which provide the backbone structure of this review. Several strands of analysis are drawn upon, including expert viewpoints and a stakeholder survey.

The primary survey was conducted with a range of stakeholders working in the field of energy poverty, energy efficiency, housing and decarbonisation, and served to generate primary data on knowledge of policies, ratings of importance on the identified barriers and governance scales, and understandings of the effects of policy on vulnerable groups.

Partners from the ENPOR Consortium also provided expert situated viewpoints, which were drawn together to provide a holistic overview of factors contributing to the key barriers, as well as suggesting potential solutions from a multi-stakeholder perspective, supplemented by the survey's findings.

A common theme running throughout our analyses and recommendations is that solutions to energy poverty in the private rented sector are situated across the barriers, and are ultimately financial, social, political/regulatory and technical. Although a practical way of identifying structural factors that can prevent investment in energy efficiency, this is where we reach the limits of the conceptual notion of 'barriers' as an explanatory tool for understanding the persistent energy poverty, housing quality and energy efficiency related challenges.

2

INTRODUCTION

Housing and the residential sector are the second largest energy-consuming category in Europe, with 26.7% of total energy, and are responsible for around 8.5% of greenhouse gas emissions. As much as 75% of the EU's building stock is inefficient, and only 1% is renovated per year. Renovating and improving the energy efficiency of buildings could reduce the EU's CO₂ emissions and energy consumption by 5%. The European Commission calculates that in order to meet climate objectives, the rate of renovations must double (EC, 2020). Despite ambitious policies being introduced into this arena, there are nevertheless numerous policy barriers to implementing energy efficiency measures, particularly in the private rented sector (PRS), for which as many as 1/3 of EU citizens rely on for housing.

Housing policy, and thus renovation of buildings, remains the responsibility of national governments. National European housing markets are particularly heterogeneous, with significant additional variation between regions, urban and rural areas, and differing devolution of policy implementation, historical housing legacies, geographical differences in housing stock, and proportion of private renters across local, regional and national scales. Renting has increased in the EU-15 since 2007, whereas in New Member States, the share of people renting has decreased.

Nevertheless, there are three pervasive themes across the EU: the rental sector is expensive, home ownership is increasingly unattainable, and there are not enough social homes to meet demand (Pittini et al., 2015). Although rent costs did fall for Central and Eastern European (CEE) countries between 2012-15, low-income households in Northern, Southern and Western Europe spend more on rent than the EU average. Omic and Halb (2017) find that at country level, those in the bottom 20% of income are substantially overburdened by housing costs (rent and bills), whilst in the rental sector, poorer households spent 35% of disposable income on rental costs, as opposed to 19% for richer counterparts. Tenants who paid at market-prices for rent were overburdened by 31.2% on average, highlighting the importance of housing policies for alleviating economic pressures of high costs (Omic & Halb, 2017).

A well-managed PRS is important in maintaining a supply of housing and providing an alternative to homeownership. However, the PRS became increasingly residualised in many countries due to policies that favoured home-owning in the latter half of the 20th century. The PRS has now become increasingly viewed by many EU states as a crucial element in housing provision, moving in policy and society from a transitional sector, to providing long-term alternatives to social housing and home-ownership for a broader gamut of society (O'Sullivan & De Decker, 2007). Although in 2015, the EU-average of PRS tenants was around 20% (Eurostat, 2017), the share of PRS housing continues to differ considerably across the EU, from around 30% in Austria, Germany and Sweden, to less than 10% in Lithuania, Slovenia and Estonia to name but a few. Broadly, the share of people living in social rented housing has fallen across the EU since the 1980s, particularly state-managed social housing (Whitehead & Scanlan, 2007).

Sendi (2016) asserts that the PRS cannot function properly if ‘the basic terms and conditions essential for its operation are not well defined and established’. Rent controls and regulation of the PRS remain a contentious issue, and vary widely across Europe, with varying impacts and outcomes on landlords, tenants and rental markets (Haffner et al., 2007). Arnott (2003) states that ‘tenancy rent controls’ are the most common form of controls, which regulates rents within an individual tenancy, but not between them, providing sitting tenants with a degree of tenure security by avoiding sharp rent increases, and allows landlords to charge starting rents at current market rates. An OECD composite index of rent regulations found that average rents are no lower in highly regulated countries, although investment and maintenance were lower (Andrews et al., 2011). Opponents of rent controls, however, argue that whilst benefitting marginal households currently in the PRS, such policies do not help those seeking accommodation. The extent to which looser regulation is impacting the lower end of the PRS – typically home to lower income, more vulnerable groups, more fearful of retaliatory eviction – is also unclear (O’Sullivan & De Decker, 2007). Ball (2015) thus describes a three-tier rental market: long-term, existing tenants benefit from lower rents and security as a result of regulation; more affluent, frequent property movers, who dilute the impacts of rent controls; and lower-income new entrants who are forced into the worst parts of the rental market. How best to regulate or deregulate the sector and implement policies to ensure an adequate supply of housing whilst protecting tenants, particularly the most vulnerable, when energy efficiency and other green renovations become central policy priorities remains a prominent debate, and how different EU states are tackling this issue remains varied.

In light of the above, this report examines the structural barriers currently preventing the implementation of energy efficiency policies in the PRS at a range of scales. In-depth desk-based research of academic and grey literature led to the identification of a number of barriers and sub-barriers to policy implementation – Financial, Political, Social, Technical and Geographical – around which this report is centred (see Bird & Hernandez, 2012; and Wrigley & Crawford, 2017 for examples). Partners in the ENPOR Consortium contributed their context-specific situated perspectives to the identified barriers, which were holistically combined to provide an overview of contributing factors and potential solutions. The results of a primary survey, which sought to obtain the opinions of a range of stakeholders involved in the European energy, housing, poverty and decarbonisation sectors are also presented in this report.

The report commences by outlining key historical and geographical trends of the PRS in selected regions, drawing on previous ENPOR reports¹. Section 4 outlines the methodology of the survey, with Sections 5 and 6 going on to present the Partner perspectives and potential solutions, whilst integrating the survey’s findings in the discussion.

¹ View “Report on Energy Poverty in the PRS – Overview and Framework”, and “Analysis and Assessment of Existing Policies in the PRS” here: <https://www.enpor.eu/knowledge-hub/>.

3

HISTORICAL AND GEOGRAPHICAL TRENDS

This section will review historical and geographical trends between a sample of case-study countries and regions, with regards to differences in housing – both temporally and spatially – the quality of housing stock, and the legacies of housing regulation, as a means to provide contextual background for the subsequent sections.

In 2016, it was estimated that globally, 1.2bn people lived in rented accommodation, particularly in urban areas, where affordability and quality of housing remains a key issue. The growth of the PRS over the past three decades does not necessarily reflect an increasing societal preference for renting. The flexibility of short leases, which is attractive for students and younger households, instead creates insecurity and precarity for low-income families and tenants. The sector is complex; a result of decreasing social housing expenditure, government interventions and changing regulations, with a blend of sub-markets and types of renters, and large geographical nonuniformity across local, regional and national scales (Whitehead & Williams, 2019).

Two housing models have primarily governed the provision of rental housing in Europe; namely the dualist and unitary rental systems. The dualist system, dominant in Anglo-Saxon countries, and also in many CEE countries post 1990, is characterised by market-leaning policies, with a profit-driven housing and rental market parallel to a state controlled social housing sector. Home-ownership is given preference, and the PRS is typically unregulated (Borg, 2014; Omic & Halb, 2017). By contrast, the unitary rental market, adopted in Germany and Scandinavia, is characterised by a non-profit housing sector, whereby social landlords compete in the private market with for-profit landlords. Economic analysis has found that generally, housing deprivation rates are lower, whilst in dualist systems, lower-income groups tend to face higher housing costs and worse housing conditions (Norris & Winston, 2011).

Cost and quality of housing are crucial to living standards and wellbeing, however a shortage of adequate housing remains a key issue across different tenure types in Europe (Eurostat, 2017). In 2014, 20% of Europeans were found to suffer from one or more housing deficiencies, including a lack of basic sanitary facilities in a dwelling, or issues with its general condition. However, these poor conditions are very unevenly distributed across Member States, with the Baltic states and Romania having the highest incidence of poor housing, and the Nordic countries the lowest. The UK has the oldest housing stock – 38% of homes predating 1945, with Cyprus having the youngest, with 34% of homes built since 2000 (Nicol et al., 2016).

The following text provides an outline of a sample of different renting contexts and contrast between European countries, illustrating the difficulties in implementing EU-wide policies and solutions and thus demonstrating the need for context-specific approaches to policy implementation. This section is deliberately non-exhaustive to avoid repeating prior ENPOR project reports.

3.1

The United Kingdom

In the UK, as elsewhere in Western Europe, the size of the PRS is now increasing, used more often, and for longer, by lower income groups that would have traditionally been housed in social housing (Scanlon and Kochan, 2011). Government support for housing benefits and council house provision has fallen following austerity measures after the Global Financial Crash (GFC) – socially rented housing represented 31% of stock in 1979, falling to 18.5% in 2004 (Hills, 2007). The UK rented sector is at present, largely deregulated, following housing commodification since the 1980s, whereby the market increasingly directed provision of housing, social housing privatisation and responsibility passed to housing associations, and increasing housing provision by the private sector for low-income groups (Dewilde and De Decker, 2016). The most prominent housing trend across the country is the doubling of private renting since the mid-2000s, now accounting for 19% of all housing tenures, with housing choices constrained by a lack of suitable housing and low incomes. In 2018, in 101 local authorities in England, the PRS accounted for at least 20% of their housing stock, up from 83 in 2012, with the highest percentages typically in London and its surrounding counties (ONS, 2019).

Analyses of the UK 2011 census by the Race Equality Foundation found that private renting increased among all ethnic groups since 1991, and that tenure insecurity was particularly pronounced among young people and minority groups (Finney & Harries, 2013). This report also found large geographical differences in overcrowding in housing, particularly concentrated in London and the Midlands. The English Housing Survey Headline Report of 2017, found that 19% of England's 24 million dwellings were classed as non-decent, with 11% having a specific hazard that posed a threat to occupants' health or safety (the top two hazards either being risks of falls or excessive cold) (MHCLG, 2019). Geographically, there is a higher proportion of non-decent homes in the North of England, with the highest share in the North West (22%) versus London and the South East (17%). 41% of all homes in the North (compared with a 38% national average) were built prior to 1944, and account for 68% of all non-decent homes. In England as a whole, 25% of people living in a non-decent PRS property live with a long-term illness or disability (Hackett, 2018). In addition, proportionally by tenure, the PRS has the highest percentage of non-decent homes (27% non-decent).

One policy designed to improve the quality and efficiency of homes is the UK's minimum energy efficiency standard, which required all landlords to ensure that their properties would achieve at least an E-rated Energy Performance Certificate by 2018. A report commissioned by the UK's Citizen's Advice Bureau found that this policy would likely lead to "substantial net benefits" for tenants, with annual net benefits of up to £1241 for upgraded G-rated dwellings, and £774 for F-rated dwellings, accounting for likely rent increases arising from the energy efficiency investment by the landlord. The report also suggested that evidence for a decreased housing supply due to cost imposition on landlords was low, although it's calculated that landlords would unlikely be able to recoup the full capital investment immediately (Frontier Economics, 2017).

A study by Boardman et al. (2005) calculated that 80% of homes likely to be lived in by

2050 are already built, highlighting the importance of energy efficiency retrofitting and improving the quality of housing stock against cold conditions, in light of the geographical disparities, rise in private renting, and significant age of the housing stock in England.

3.2

Central and Eastern Europe

Little data exists on the PRS in post-communist CEE countries: indeed, in Hungary, a 2000 study found that no statistical data existed on the PRS, although rates tended to be under 10% (Erdoes et al., 2000), whilst in Croatia, Tsenkova (2009) suggested it functioned within the informal economy to a large extent.

According to Sendi (2016), the PRS in Slovenia has operated since 1945 without official recognition or governmental policy support, with little attempt to support its development, despite awareness of widespread issues. He suggests this is a result of “unfavourable attitudes” of policymakers towards the sector. In 1991, Slovenia introduced housing reforms utilising the “enabling principle”, in particular privatising public housing and the restitution of nationalised housing to previous owners, a policy adopted in many post-Communist countries, and leading to a reduction in the size of the rented sector. The devolution of responsibility of the state to provide housing is known as the “Enabling Principle”, which meant that instead of providing housing, the state would create conditions for citizens to resolve their housing needs, a principle which was adopted across Europe in the 1990s.

As a result of a lack of data collection on the sector, lack of attention by state policies, and general data gap, the sector continues to operate largely informally and with the “negative corresponding attributes of grey market activity”. If we do not know how many people use the rented sector as housing, or if it is not adequately addressed by government policies, it will be difficult to properly target vulnerable PRS tenants, or to create policies which address the specific needs of these stakeholders in general terms or with regards to energy efficiency, if they are politically and structurally invisible.

3.3

Germany

Like many coordinated market economies (CME), Germany has low levels of home ownership, at around 39%. Germany has what is known as a unitary rental housing market, with social housing not confined to lower-income groups, exposed to competition with private landlords, and with little difference between the quality and cost of rent in the PRS or social housing. Conversely, the UK context has stark quality and rent cost differences, with social housing being ‘highly stigmatised’ (Kemp and Kofner 2010, 382). Other highlighted features are stable house prices, regulated market finance, and home purchase attitudes of ‘once in a lifetime’.

In Germany, as the sector is not focused on niche markets, like students or young professionals, it serves a wider gamut of society and is a ‘cornerstone of housing provision for all parts of the population’. Households with subprime credit status are not encouraged to take out mortgages for homeownership, meaning that mortgage borrowers are less vulnerable in recessions. This makes the real estate market more stable. Private landlords are less motivated by short-term capital gains or investment, generally having much longer investment horizons, and tax reasons play a larger role in

renting out properties due to substantial depreciation allowance. Tenures are much more secure, as landlords have no right to arbitrarily end contracts unless there is proof of breach of contract for example, and rents cannot be raised by more than 20% in three years. There is widespread availability of good quality housing, investment in stock by landlords and low residential mobility, in contrast with, for example, the UK's lower end, where poor quality is pervasive (Kemp & Kofner, 2010; Kemeny, 2006).

3.4

Portugal

Branco and Alves (2015) explain that over 1 million buildings in Portugal are in need of repair, of which around half of these are 'significant'. Some of this dilapidation is attributable to widespread rent freezes, which existed in the country from 1910 up until 2012. As sitting tenants could not be charged a rent increase or be evicted, property owners were not, as a result of inflation, making enough money to renovate or maintain their buildings, leading to some older properties lacking basic amenities, such as inside bathrooms. The financial crisis led to a large-scale decrease in public funding and renovation policies, leading to a review of the importance of the PRS for housing provision and urban regeneration. In 2012, a five-year transition period, phasing out rent controls and old lease contracts to new market rate rents, was introduced. Nevertheless, fears of 'renoviction', where low-income families are displaced by rises in rents and gentrification, as well as very high rents for new lets that force people out of city centres as a result of this deregulation remain.

4

PRIMARY SURVEY: METHOD AND RESULTS

A survey was designed and disseminated by the ENPOR partners to investigate different stakeholder perspectives on the barriers to implementing energy efficiency policies in the PRS beyond the Consortium.

The survey aimed to reach stakeholders in the policy-making and implementation process, and those who would be affected by these policies. Target groups were as follows:

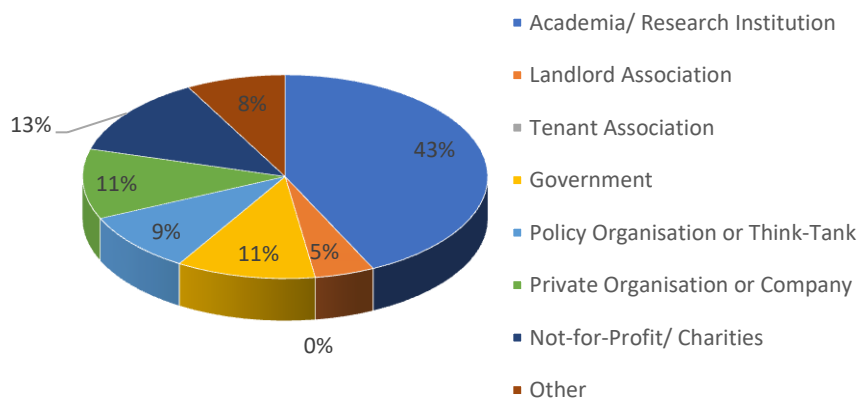
- Academics or researchers in the domains of energy efficiency, energy poverty, housing and housing decarbonisation;
- Representatives of Tenant and Landlord Associations;
- Government bodies at the local, regional, national and EU scales;
- Private organisations or companies;
- Think-tanks, policy organisations and policymakers
- Not-for-Profits and charities

The EU-Survey platform was used to host the questionnaire, with a three week period allocated for responses. The survey was disseminated via the ENPOR newsletter, website and social media channels, as well as individual Partner channels.

4.1 Demographic Data

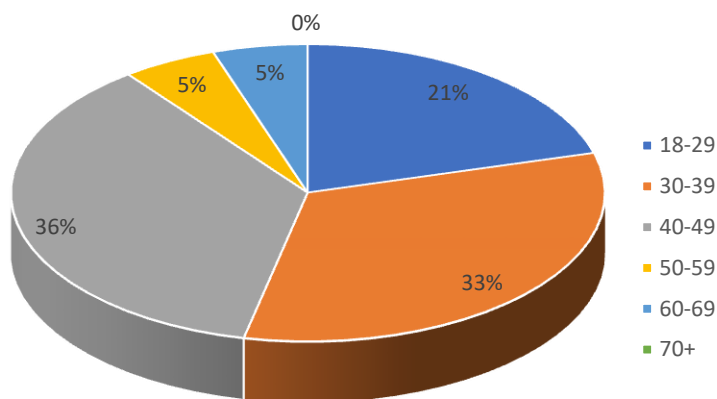
58 responses were received in total responses. Academia and research institutes were the most represented sector, with 43%, whilst no responses from tenant associations were obtained – see Figure 1. Landlord associations were also underrepresented, with only 5% of responses. EU-wide organisations comprised six responses, with the remainder being nationally-focussed organisations (seven responses from outside of the EU – USA, UK, Bosnia & Herzegovina). With regards to government respondents, 70% were from national and 30% from regional governments, with no EU or local governments represented.

Figure 1: Pie Chart of Respondents' Representative Sectors



With respect to gender, 60% of respondents identified as female, 38% as male and 2% as neither/other. We received responses in every age category except 70+, with the most common age being 40-49 – see Figure 2.

Figure 2: Pie Chart of Respondents' Representative Ages



4.2

Rated Importance of Barriers to Energy Efficiency Policy Implementation

Respondents were asked to rate identified barriers (Financial, Political, Social, Technical and Geographical) on their importance in preventing energy efficiency policy implementation in the PRS, on a scale of 1 (not at all important) to 5 (extremely important).

Across the board, **Financial was deemed to be the most important barrier**, with 70% of respondents rating it as 5 - Extremely Important, and 88% rating it with a 4 or 5. Social barriers were rated as second most important, with 69% of respondents rating it as a 4 or 5, with 4 being most common.

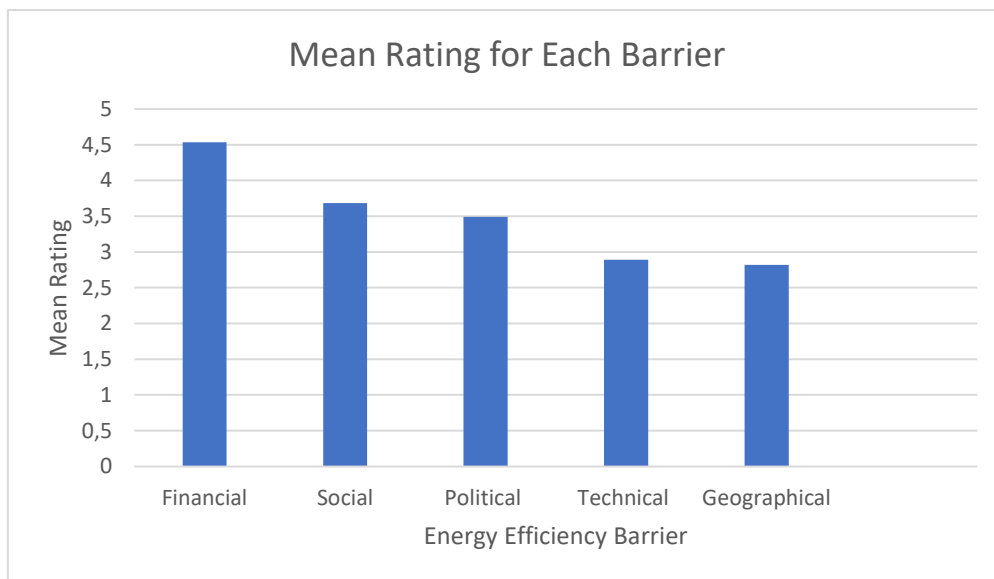
Political was rated as the barrier of middle importance, with 59% of respondents rating it as a 4 or 5, with 4 being the most common rating. Technical or technological related factors were deemed to be the fourth most important barrier, with only 10% deeming it to be 5- Extremely Important, and the most common ratings being 2 or 3 – Quite Important.

Geographical or spatial differences were rated as the least important barrier, with only 6% rating it as 5 – Extremely Important. The most common response was 3 – Quite Important, with 40% of respondents rating it this way.

The mean rating for each barrier can be seen in Figure 3, in order of most to least

important as determined by survey respondents. For each barrier, the median response was above 3, showing that each of these barriers were classed by the survey respondents as being at least 'Quite Important' as factors that prevent investment and engagement with energy efficiency policy implementation.

Figure 3: Mean Rating for Each Barrier as Determined by Survey Respondents

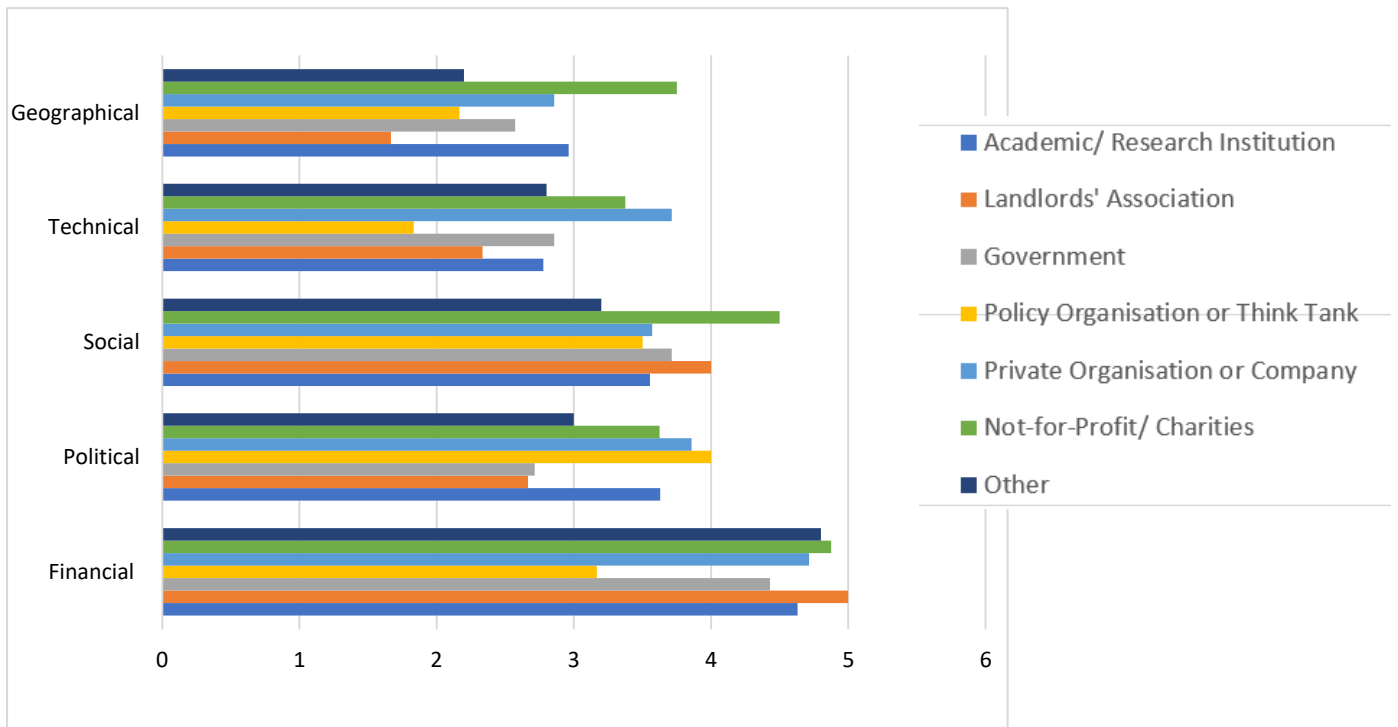


When broken down by gender, we see very little differentiation between assessed importance of barriers, with all rating financial as the highest. One observation of note is that **women rated the importance of technical barriers higher than men** (mean=3.09 vs mean=2.46), with men rating it as the least important of all barriers.

When disaggregated by representative sector, once again, we see that **financial barriers are the most important for all groups**, except those representing policy organisations/think-tanks, who on average, thought that political barriers were most crucial in preventing investment in energy efficiency in the PRS. Interestingly, those from not-for-profits/charities rated the importance of all barriers on average the highest, and policy organisations rating all barriers on average the lowest. We present the breakdown of barriers by importance as rated by representative sector in Figure 4.

Respondents were also asked if they believed there were any other barriers to implementation beyond the categories provided. Issues surrounding renovations in multi-family buildings and homes in multiple occupancy where conflict may arise was a common response, the invisibility of PRS tenants, lack of coherence in the sector and the relatively small size of the sector compared with home-ownership in many European countries.

Figure 4. Mean Rating for Each Barrier Broken Down by Representative Sector



5 STAKEHOLDER VIEWPOINTS: IDENTIFIED BARRIERS TO RENOVATION IN THE PRS

The following two sections are consolidated and triangulated expert viewpoints and inputs derived from the praxis and experience of partner organisations in the ENPOR Consortium, and supplemented with findings from the primary survey. The contributing Partners are as follows:

- International Union of Property Owners (UIPI)
- University of Piraeus Research Centre (UPRC)
- Institute for European Energy and Climate Policy (IEECP)
- Wuppertal Institute (WI)

5.1

Financial Barriers

Contributions by UIPI and UPRC

Financial barriers to implementing policies or investing in energy efficiency measures in the PRS are usually characterised by the split incentive – or lack of direct financial incentives – and high upfront costs for landlords. Other barriers can include long pay-back times for retrofit interventions, insufficient or unavailable funding, and lack of attractive financing for lower income property owners. For example, many current schemes only

target owner-occupiers, and are not open to either landlords or tenants, or inadequately cover the specificities of the PRS (D'Oca et al., 2018). A survey carried out by UIPI in 2021 found that although 77% of landlords (of 10,000 surveyed) thought it was beneficial to make their properties more energy efficient; 31% who did not renovate but wanted to do so did not have the necessary funds (UIPI, 2021).

The split incentive is a term used to describe the situation where landlords pay for the retrofit improvement measures in a property, while tenants are the main beneficiaries of these improvements, such as lower energy bills and increased thermal comfort, meaning that the party making the financial investment does not directly benefit from this (Gillingham et al., 2012).

Energy efficiency retrofits often require new materials, technologies and installation labour that can result in high upfront financial costs. In addition, depending on the property's condition, increasing energy efficiency may require extensive renovations, which often tend to result in even greater investment. These costs can be broken down as follows:

- Assessment costs – incurred by property owners to have their properties assessed and to arrange and finance any required improvements;
- Installation costs – from carrying out the necessary works to implement the energy efficient measures;
- Replacement costs – replacing appliances that are still working and could have a longer life span;
- Financing costs – the renovation for the property owner (or tenant), depending on the conditions of the commercial loan obtained by bank or government scheme;
- Hidden costs – not clear contract results, clean-up costs after the renovation, not being able to inhabit in the building / home (in the case the property owner is the property occupier) or lost rental cost (in the case of landlords);
- Legal expert hiring costs – to assess to what extent certain measures can be implemented in a building (Artola et al., 2016).

Lack of funding opportunities and/or inability to secure finance on acceptable terms is generally one of the most cited barriers to investing in energy efficiency measures. However, it should be emphasised that it is often not a simple lack of funding that creates an obstacle in financial schemes. The problem is centred more on the quality of such schemes, as tailored, accessible, and well-targeted funding in the private rented sector is frequently lacking. Additionally, lack of stability, problems of blending finance and issues of complex application procedures are obstacles that significantly affect the funding and reduce its efficacy. The incentives created for landlords and tenants should not create burdens and complications which, in the end, have the effect of hindering the renovation process. The objectives set by public authorities should be feasible, realistic and based on the actual economic capacity of the actors involved. In addition, consumers and landlords – especially non-professional ones - are often confused by the number and complexity of grants at the local, regional and national level, which can have different compliance requirements (UIPI, 2021).

Another key barrier to renovation is the lack of certainty with regards to property value increase. Tenants can also be unwilling to engage with renovation plans, due to fears of subsequent rent increase, which could exceed overall energy savings, or lead to in certain circumstances, eviction. ‘Renoviction’ is a documented phenomenon whereby tenants are forcibly displaced as a result of ‘value-added renovations’, in order for landlords to repay their investments, extract more profits and value from the property, and in some cases to ‘change the social structure of existing tenants’ (Bouzarovski et al., 2018; Skanby, 2014). On the other hand, an aim to improve the marketability of the dwellings is lacking, which is expected, considering that the way that energy efficiency improvements affect the value of real estate properties remains ambiguous. Implementation of methods to improve transparency of energy consumption in buildings, like energy performance certificates, could enable market actors to take energy efficiency investments into account (Zancanella et al., 2018).

5.2

Political and Regulatory Barriers

Contributions by UIPI and UPRC

Our primary survey asked respondents about their level of awareness of EU-based policies to address energy efficiency in the PRS. Only 16% of respondents stated that they were ‘very aware’, with the majority (72%) stating they were ‘fairly aware’; i.e., that they knew there were policies in place but could not name them or express details. 7% had never heard of such policies. These results serve to highlight first, that knowledge on these topics is relatively low, even among those working in the sphere of energy, decarbonisation, poverty and housing, in a range of different sectors, second that there aren’t enough policies, and third, that information about these policies is not well communicated or available.

These results back up our findings in Report 2.1b, which found that few policies adequately addressed the specificities of the PRS, or were not sufficiently targeted to the lower-income, vulnerable segment of the PRS. Of the current policies in place to implement energy efficiency measures in housing, few attempt to overcome regulatory and political barriers, as this can often be a contentious or sensitive topic amongst the PRS’ different stakeholders. Political invisibility of the most vulnerable tenants can also be a major hindrance to policy implementation in this sphere, as demonstrated by the lack of relevant data. While there are many ways to measure energy poverty, there is still a lack of data on energy poverty metrics and supporting indicators. Data is typically collected through time-consuming, expensive, and sometimes impossible to carry out surveys. Lack of data for most indicators is worse in years before 2016 (Hassani et al., 2019).

In many cases, attempts to overcome these barriers are often the setting of obligatory minimum energy efficiency standards. Mandatory minimum energy performance standards for existing buildings and energy performance certificates (EPC), require all residential buildings to meet a certain energy efficiency standard, and provide a certificate of this rating to tenants. Some landlords and landlord groups consider that the setting of mandatory standards can create an obligation to renovate regardless of context or economic circumstance, and can lead to abandoned buildings as property owners

consider meeting such requirements too expensive. Nevertheless, minimum standards legislation such as those required in the UK *do* include caveats for protected or listed buildings, as well as stating an explicit cap for expenditure on energy efficiency renovations (UK Government, 2020). Furthermore, there are some studies which suggest that the EPC is not a reliable document for assessing the energy performance of homes as they often overestimate current energy consumption, resulting in optimistic energy saving opportunities (Cozza et al., 2020; Monfils & Hauglustaine, 2016)

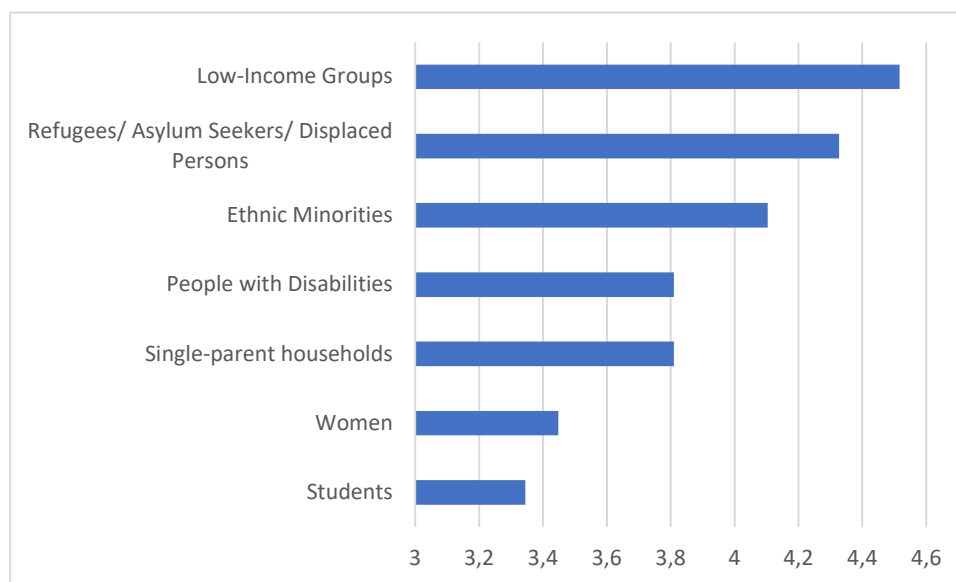
As mentioned previously, rent controls are particularly controversial, and can prove an obstacle to renovation (Branco & Alves, 2015). Controls are generally used to tackle a lack of affordable housing and disparity of income in certain areas, particularly within cities. Its practical effect is that it sets a limit on the rents a landlord can charge for each specific unit type by eliminating the free-market influence (Diamond et al., 2019). Opponents of rent controls argue that although rent costs are frozen, none of the other costs associated with owning a property are capped in line with this, meaning that the landlord experiences a diminishing return. To avoid running at a loss, they must cut repairs, services and renovation initiatives, which leads to the deterioration of the building. The financial burden is placed upon the landlord, which does not work to alleviate the split incentive.

5.3 Social Barriers

Contributions by UPRC, UIPI, IEECP and WI

Survey respondents were asked how much certain vulnerable groups were affected by energy poverty in the European PRS, grounded in the literature (Walker & Day, 2012; Robinson, 2019; Legendre & Ricci, 2015) on a scale of 1 (not at all affected) to 5 (extremely affected). Figure 5 presents the mean rating for each identified vulnerable group. Low-income groups in general were rated as being the most affected by energy poverty, which follows the statistic that each mentioned group is more likely to be in a lower-income category than the average population. All groups were rated on average 3 (affected), showing that respondents believed each identified group to be vulnerable to energy poverty.

Figure 5: Mean Rating for Identified Vulnerable Groups



Varying social factors, including the presence of these different vulnerable and low-income social groups in the PRS, in many cases can influence the adoption of energy efficiency schemes and renovation measures.

The EmpowerMed project published a report detailing social barriers in 2020. Trust transpired to be a crucial element - measures that target vulnerable groups can be perceived with mistrust depending on the context and actors involved. For example, the “Stromsparcheck” programme in Germany offered free energy checks and explanations on how to reduce energy and water consumption without reducing the living comfort, such as through energy efficient devices. The programme’s energy consultants were sometimes perceived with mistrust as people worried that they aimed to sell their products for profit. On the other hand, the programme was very successful when the target groups were approached through personal contacts, information days (at churches, job centres, social organisations) and the work of multipliers (e.g. social workers). Feelings of stigmatisation and shame can also play a role: the report found that when vulnerable groups apply for grants or full subsidies, they can be stigmatised by neighbours or building managers who are aware that they receive such financial support. This was considered one of the reasons why vulnerable groups in Slovenia hesitated to apply for grants. Consultants offering energy checks and energy savings’ advice in the above-mentioned Stromsparcheck faced difficulties in convincing pensioners to receive support. One of the possible reasons considered was that pensioners might feel ashamed of receiving support, deciding to refuse it. Furthermore, measures that target vulnerable groups should also take into consideration how these groups might perceive the procedures and conditions involved in applying for support. If the process is perceived as time consuming, complex and/or difficult, vulnerable groups, indeed all groups, can be more reluctant to apply (Habersbrunner et al., 2020). A report by the German Federal Environmental Agency also found that language, narrative or framing of the issue, the intimacy of allowing advisors into homes and the asking of sensitive questions can all also pose additional barriers to scheme uptake (Umweltbundesamt, 2020).

The EmpowerMed report also recognised a gender dimension with regards to barriers to policy implementation, an issue which our primary survey also picked up, with women rating technical barriers as more important than men. A lack of awareness of this issue is linked to political invisibility issues described in section 4.2, with a dearth of gender-disaggregated data on energy access, management, use and opportunities. Conducting gender and social impact assessments on programmes to determine differences in perceptions, uses, needs and capacities, as well as whether schemes are reaching men and women equitably was highly recommended (Habersbrunner et al., 2020).

A comparative study by Carliner and Marya (2016) of several countries (EU members were Austria, Belgium, France, Germany, Italy, Netherlands, Spain, Sweden and the UK), found that households with foreign-born members are more likely to be renters, with larger household sizes, and more likely to live in overcrowded and substandard housing (Carliner & Marya, 2016; OECD, 2015). In all surveyed countries, young people are more likely to be renters than older people, whilst for all renters, Spain had the highest median cost burden of gross household income spent on housing, closely followed by the UK and Belgium. Thus, as outlined above, policy implementations must collect data on different socio-economic factors with regards to the PRS, and design tailored, transparent and inclusive policies that encompass the wide range of lived experiences of those in the

rented sector.

Even if energy efficiency measures are implemented, this does not mean energy consumption or costs will go down, as a result of the performance gap and rebound effect. The rebound effect describes the difference between theoretically expected saving and the savings achieved, for example when cost reduction from energy efficiency measures lead to increased consumption. Lack of knowledge about existing solutions can create information barriers that prevent renovation to achieve better energy efficiency. The lack of policies, examples, good practice and data on high energy efficiency properties do not create a large incentive for stakeholders in the PRS to renovate. If landlords have lack of necessary knowledge on possible solutions or costs, there is no impetus to act (Jakob, 2006), whilst if tenants are not informed about the benefits of energy efficient buildings, it is unlikely they will be willing to prefer such a property.

The rental market in Europe remains primarily comprised of small-scale landlords that can often result in a lack of professionalism, inadequate knowledge to tackle energy issues and poor confidence in applying for grants or subsidies. Lack of professionalism is increased when landlords are not members of industry associations that can provide professional counselling and trainings to overcome these issues (UIPI, 2021). Alongside the rental market growth experienced in recent decades, there remains a sector of low-income landlords for whom the obstacles associated with renovation and transition to more energy-efficient housing are more pronounced, and who are more affected by economic stability and legislative changes in housing. In addition, mistrust is not limited to tenants; landlords can also have deep-seated scepticism of policy and legislation, particularly if they are doubtful that modernisation and retrofitting will yield economic savings.

5.4

Technical Barriers

Contributions by UIPI and UPRC

A lack of technical knowledge is a barrier that prevents the implementation of energy efficiency measures, whereby tenants and landlords are not fully aware of the benefits that the renovation could bring or mistrustful of certain implementation solutions. Furthermore, mistrust towards innovation professionals or the overwhelming number of offers can highly affect the final decision to renovate or not renovate (D'Oca et al., 2018).

Mistrust in new technologies is often connected to lack of technological knowledge. According to property owners' associations, there is a certain level of mistrust towards new technologies among their members, corresponding to the behavioural aspects towards available technological solutions and the possibility of purchase and use of such products. It is mainly connected to lack of knowledge about the issue and related technologies, the perception, feelings and interpretation of information, which all may cause fear and concerns regarding new technologies (ABRACADABRA, 2018; Assefa & Frostell, 2007).

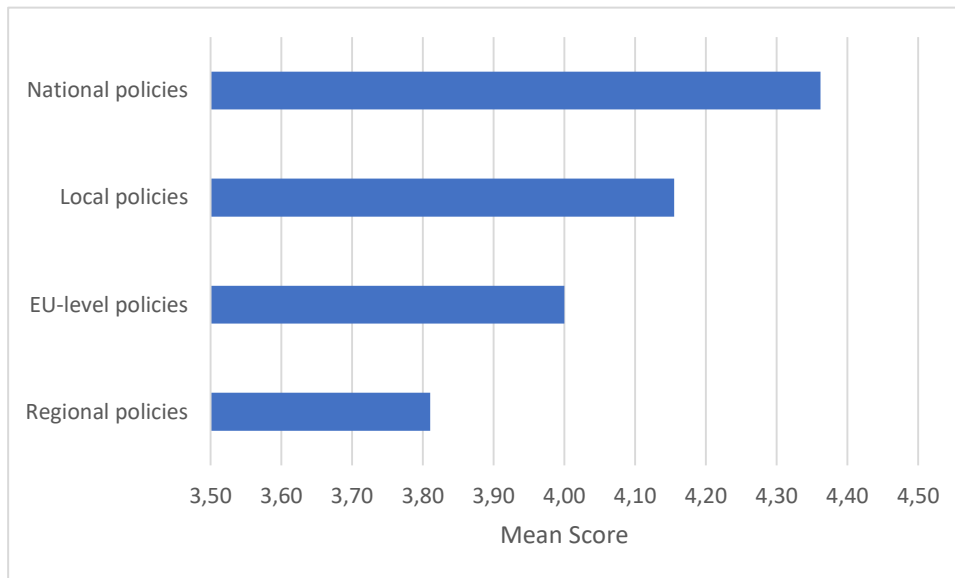
Risk aversion can also arise due to lack of information on technologies. Lack of knowledge and capacity discourages the adoption of new and more efficient designs. Most energy users think in a traditional way, and thus focus more on initial investment costs rather than operating costs and money saved over time. Moreover, in many circumstances, consumers assume that energy efficiency adds to the costs and projects' duration. Decisions are often a product of individual perspective and bias regardless of complete information and rational utility. For example, if the probability of profitability is 95% for a certain investment – choosing highly energy efficient windows rather than ordinary ones when renovating - less than 95% of households will invest because of their risk averse nature (Pålsson, 1996). These people tend to focus on price and costs rather than returns and ignore small energy saving opportunities. Additionally, emotional factors or aesthetics are aspects that also influence a decision to renovate. The level of risk aversion tends to increase with age as people may prefer the status quo or commonly used solutions (Vavallo et al., 2019).

6

STAKEHOLDER VIEWPOINTS: POTENTIAL SOLUTIONS

Survey respondents were asked to rate the importance, on a scale of 1 (not at all important) to 5 (extremely important) of different scales of governance, for implementing energy efficiency policies and tackling energy poverty. Mean scores for each can be seen in Figure 6. National policies were deemed to be the most important, followed by local-level policies. As each country's PRS is so different, grounded in different historical, geographical and political legacies, it follows that more situated and context-specific policies might better serve to overcome the different energy efficiency barriers in the sector.

Figure 6: Mean Scores for Importance of Governance Level for Implementing Energy Efficiency/Energy Poverty Policies



6.1 Financial Solutions

Creating support packages for landlords to effectively and efficiently finance renovations has been identified as a key mechanism to target the investment cost barrier. A survey by the International Union of Property Owners (UIPI) found that 34% of landlord respondents would renovate their properties if financial schemes were in place to do so. The most top three most attractive incentives for renovation, according to the same survey, would be grants, subsidies and tax relief, in the form of income tax, property tax or VAT reductions. Other potential incentives might involve professional or technical advice, one-stop shops and loans, although loans were the least preferred option. Results from the primary survey also found that most respondents suggested financial incentives, such as subsidies and tax incentives to promote renovation, from the EU to the local level, as the method to tackle financial barriers. One respondent suggested that local banks could develop tailored services, with nationally mandated ESCOs to offer innovative financing solutions, whilst another suggested funding training for social and health workers to identify vulnerable people at risk of energy poverty.

Some examples of national schemes of note are described as follows. The Italian ‘Superbonus’ is a 110% tax discount on the expenditure incurred for energy and anti-seismic renovation. This merges two existing tools, namely the “Ecobonus” and the ‘Sismabonus’. Households can use the so-called Superbonus to deduct the cost of renovation work on houses and apartment buildings, with a tax advantage of 110% of the costs incurred to be spread over five years, without income requirements. The credit can be used directly by the beneficiary, or it can be transferred to the supplier (e.g. the contractor) carrying out the intervention. When this scheme is not applicable, homeowners and landlords can still deduct up to 65% of the investment costs for renovations. The applicability for landlords is still quite limited, but the scheme is under revision (Italian Ministry of Economic Development, 2021).

Similarly, the French “MaPrimeRénov’ is a new financial aid scheme for energy renovation work, available for homeowners as well as for private landlords. In essence, it provides a new holistic renovation package to encourage ambitious works that allow energy savings of more than 55%, as well as two additional bonuses: a ‘sortie de passoire’ (sieve exit) bonus to target the most energy-consuming buildings by upgrading their energy label from F or G upwards, and a Low Consumption Building (BBC) bonus to reward the achievement of an A or B rating. This scheme has become the main aid for energy renovation, but it can also be combined with other financial aids, including Energy Saving Certificates (EWCs) and Action Logement (Housing Action). The accumulation of these aids makes it possible to reach an assistance total of up to 90% for the lowest income households’ renovation costs. “MaPrimeRénov’” is now accessible to all owners and co-owners, whether they occupy their property or rent it out. The base rate of aid is calculated based on household income and the ecological gain. The beneficiaries know the amount before starting their work (French Government, 2020). Finally, “Grants for social insulation projects for rental buildings” in Belgium and the “Nyth Nest scheme” in Wales are policies that, besides addressing some of the barriers mentioned above, also tackle the increased-rent barrier by not allowing landlords to raise the rent as a result of renovation actions.

Targeted energy efficiency financial services mechanisms could also be of use here, such as “on-bill finance”, which obtains access to capital to fund energy efficiency investments in buildings and making repayments through energy bills, although this places an increased burden on vulnerable tenants (Castellazzi et al., 2017). Another example is the Property Assessment Clean Energy (PACE) mechanism, which finances energy efficiency upgrades through specific bonds offered by municipal governments to investors. The loans are repaid over the assigned term (typically 15 or 20 years) via an annual assessment on the property’s tax bill. The tax assessment is not placed on the property owner but on the property, allowing its transferability and helping to overcome split incentives. Blending finance schemes can also address the lack of landlord support for loans alone, for example, subsidies combined with tax rebates and preferential loans (UIPI, 2021).

Balancing the split-incentive dilemma through rent increases or contribution payments – although less than the total energy saving to ensure benefits for the tenant – are also possible. For example, in order to encourage landlords to renovate, French legislation introduced in 2009, the “Troisième ligne de quittance”, authorises landlords to carry out energy-saving works and, in agreement with their tenants request a monthly contribution from their side (French Government, 2009). When energy-saving renovations are undertaken by a landlord within the private and/or common parts of a dwelling, a contribution for sharing the saved energy costs can be asked from the tenant, as from the end of the renovations, provided that the tenant directly benefits from the renovations made and that these have been explained to them beforehand. Nevertheless, this contribution can only be asked if substantial work has been done or if the dwelling reaches a minimum level of energy performance. This participation, limited to 15 years maximum, is specified in the rental agreement and cannot exceed 50% of the energy-saving made.

In summary, the set-up of an ideal financial policy to address this barrier would not be a straightforward task, and would likely require multiple interventions. The landlord-tenant dilemma and a variety of other financial concerns like high costs, lack of information, etc.,

are the primary reasons that energy efficiency investments in the PRS are facing challenges.

As a result, an ideal policy would be one that equally considers both landlords and tenants, and it is structured based on financial incentives and models. Such financial and fiscal incentives refer to provisions by governments, energy suppliers, and other sources that intend to overcome upfront costs, but are designed in a way to meet the special challenges that rented properties face. In general, policy transparency, communication, fairness in benefits, durability, and longevity are important concerns when designing policies to address financial barriers and support energy vulnerability in the PRS.

6.2 Political and Regulatory Solutions

One mechanism to tackle political invisibility and the lack of data is the creation and operation of observatories at the national, and/ or the EU level, to raise awareness on energy vulnerability and poverty. For example, the EU Energy Poverty Observatory (EPOV) has been developed by a pan-European consortium, aiming to engender transformational change in the availability of information on the socio-economic extent of energy poverty in Europe, improving transparency of data and knowledge, enabling networking and disseminating information across the EU. Other national observatories, for example, in France, can also provide more in-depth specific domestic data collection, as is the case with most of the national energy poverty observatories around the EU.

Responses from the survey also reflected that political invisibility must be tackled and increased political regulation must be implemented, particularly at the EU level. Some respondents suggested that all Member States should be required to adopt clear action plans to improve the least efficient dwellings with milestones, developing EU-wide regulation for monitoring and evaluating the impacts of energy poverty, and mandate member states to adopt a definition of energy poverty as well as a method for identifying those at risk of it. At a local scale, specific urban planning tools, identifying priority neighbourhoods and local action plans were all suggested solutions.

To encourage energy efficiency investments in the PRS, the dialogue between involved parties must be supported, legal frameworks and specific conditions for the redistribution of investment cost savings of energy efficiency upgrades between the landlord and the tenant should be laid out, as well as additional issues such as the limits of rent increase and the conditions under which tenants can reject a rent increase. For example, to facilitate improvements in dwellings with low-income tenants, governments could cover part of potential rent increases which are not offset by energy cost savings. A better definition of democratic rules is also necessary to ensure that a single owner should not be allowed to prevent energy efficiency upgrades in a shared condominium building (UNECE, 2017).

Reducing energy consumption and increasing energy efficiency in buildings is currently an important cornerstone of the EU regulation. Energy performance certificates (EPCs) are implemented as one of the tools to promote this agenda and are used for the energy performance assessment of buildings. “Minimum Energy Efficiency Standards” in the UK set a property’s EPC minimum standard at E so that a property is eligible for renting. A similar regulation we meet in France, where the minimum standard of EPC is also E.

Furthermore, different types of energy efficiency minimum standards are used in Flanders (Belgium), where they include roof insulation and double-glazing standards. An interesting policy that standardises properties without being connected with EPCs is “Housing Health and Safety Rating System” (HHSRS) in the UK. The policy concerns a risk-based evaluation tool to assess risk to health and safety in the home, and is used to assess the likelihood of faults or deficiencies impacting the wellbeing of those living in the dwelling.

In addition, real performance metrics could complement EPCs, which could contribute to tailored and specific renovation advice to building owners, proper design measures and better renovation coordination. This would also allow better calculation of savings predictions. EPCs could also include energy savings expressed in real terms (reduced kWh/year) rather than primary energy demand or cost savings, which are subject to political decisions and price fluctuations.

Finally, higher effectiveness of the existing legislation and regulatory framework should be pursued, emphasising further development, improvement, and enforcement of secondary legislation, norms, standards, targeted programmes and policies. In this context, policy transparency, communication, and long-term vision, combined with accurate monitoring tools and implementing instruments, are important factors that should not be neglected.

6.3

Social Solutions

In order to deliver tailored social policies, long term-funding for such measures must be secured, tying social solutions in closely with the financial and political solutions explored above. The expansion of advice services through improved outreach to affected persons, through the closer integration of advice centres of social associations, job centres, municipal authorities combined with training relevant staff on how to deal with energy efficiency and energy poverty issues might also prove valuable. Developing target group-specific consulting services (framing, language, time flexibility, advisors originating from respective groups) might also work to alleviate trust and shame barriers. To address the rebound effect, these advice centres can also provide education on energy efficiency measures, how to best utilise them to their advantage and promote sustainable consumption of energy.

Tackling the lack of data on problematic energy or housing situations and vulnerable target groups, but also on the energetic condition of the buildings, heating modes and so on requires cooperation with all stakeholders, particularly tenants and landlords, who are best placed to provide this information. **Increased and systematic participation in a landlords’ association for rental property owners** could provide a way to centralise this information. Being a member of a landlords’ association also brings advantages such as better awareness and subsequent promotion of the PRS’s needs and interests. Thus, the significance of a series of national or regional associations that train landlords and offer information and support can be highlighted. In some situations, gradual implementation and long lead-in times of regulation, allowing time for adjustment and education on the topic can be useful, as well as increased financial aid for lower-income landlords.

Respondents in the survey also reflected the above suggestions, discussing the

importance of raising awareness in local groups, creating inclusive policy that involves citizens and their needs, increasing resources for social services and so on.

6.4

Technical Solutions

Education on technologies and technical factors involved in energy efficiency and retrofitting could be a possible solution to this barrier. To raise technical awareness in a successful way, target groups need to be convinced to take actions regarding the adoption of better energy management practices and energy efficiency technologies for new or existing dwellings. An important factor is to ensure that the advice given to intended beneficiaries is credible, unbiased and not exaggerated. Eligible beneficiaries, especially more vulnerable ones, need trustworthy advisers who are not trying to “sell” them goods and services. Lists of trusted professionals could be provided by neutral parties such as public authorities, property owners or consumers associations, or “one-stop-shop” structures. The lists should have a non-exhaustive character, but with sufficient choices and a wide price range for the services offered. This would constitute a relatively low-cost measure to tackle a lack of transparency in the market. Advice to interested parties should point out areas of inefficiencies, propose suitable solutions, assess the expected economic benefits, and recommend reliable contact points for further assistance during implementation. Our survey respondents also echoed the sentiment of the importance of providing technical and professional advice, training the ‘trainers’, and generally increasing awareness, knowledge and support within schemes for technical implementations.

The creation of One-Stop-Shops that can grant coherent and consistent support throughout the retrofit project, guarantee impartial and holistic guidance and a full-service package would ensure consumers/owners always have someone to talk to and who will deal with any issues they may be facing. This might mean being guided to more expert professional advice. As a services hub, one-stop-shops can serve as the interface between consumers and accredited installers. As well as ensuring enough reliable and accredited installers, one-stop-shops would then be the third-party that provides an impartial situation assessment, defines which professional is liable when something goes wrong and smoothly implement the corrective works (McGinley et al., 2020). From a technological point of view, it may not be possible to carry out certain types of renovation quickly without the need to interrupt the tenant's stay, and thus the development and expansion of plug-and-play technologies to limit disruption and reduce risks of installation could be a possible solution (d'Oca et al., 2018; UIPI, 2018).

Another useful type of support is **training and capacity building of target groups**, so that they are capable to make decisions on their own and take appropriate steps for the implementation of suitable energy efficiency measures, enhancing knowledge on the topic and helping them to realise the long-term benefits of energy efficiency investment. There can be several categories of training based on the requirements. On the one hand, training can take place in the form of specialised programmes aimed at managers, engineers, technicians, and operators, while on the other, they can be developed around a subject, providing in-depth knowledge on specific techniques or methods. Independent and trusted guidance could be provided by local authorities and national property owners' associations. They should be directly involved in providing a comprehensive service package with information on the most efficient technologies, available funding

instruments, fiscal measures, lists of certified building professionals, etc. to property owners at the local level. As one survey respondent suggested, NGOs can also play a role here, making use of mediatory and technical expertise to support energy efficiency implementation. EU initiatives such as “ECOLISH” and “ELIH MED”, seek to overcome such barriers by raising awareness on energy efficiency investments, and by recognising the importance of accompanying refurbishment projects with awareness-raising campaigns, so that households understand better the challenges and benefits they can reap from them.

The establishment of a building renovation passport, which is a document in electronic or paper format, outlining a long-term (up to 15 or 20 years) step-by-step renovation roadmap for a specific building, resulting from an on-site energy audit and fulfilling specific quality criteria and indicators established in dialogue with building owners can help to promote progressive renovation and avoid the initial high upfront cost barrier. Nevertheless, the establishment of a reliable and good quality passport and corresponding roadmap requires a good audit in the first instance, which is often expensive. It is unlikely that owners of the worst performing stock will be ready to spend €1000 (prices differ but it is generally acknowledged that a good passport would cost this price), and if they do, they will have less money available to invest in the actual renovation. Therefore, the most promising solutions are those where the passport is subsidised partially or entirely.

An example of a pilot venture in this arena is the Passeport Efficacité Énergétique (P2E) in France. P2E includes basic information on the house, household and the energy expert. It describes a two-stage renovation process, including an indication of performance for each of the measures, and the overall cost. Additionally, it includes information on why renovation should be coherently staged and how to ensure this, as well as general information on why renovation will benefit the homeowner. Between 2016 and 2018, 1,172 P2Es were carried out in several test phases. The survey showed that piloted households were very satisfied with the passport in the terms of duration, reliability and provided information. 68% of piloted P2Es stated that the instrument triggered additional energy saving measures, 19% extended the planned renovation to cover additional measures, 19% increased the energy performance level of an already-planned measure, and 30% integrated energy performance measures in their previously non-energy-related renovation project. Experts estimate that P2E would cost around €400 including VAT. However, households were only willing to pay around €105 on average (BPIE & INIVE, 2020).

7 CONCLUSION

This report has explored the structural elements that underpin efforts to improve the energy efficiency of the private rented sector in Europe. Based on the ENPOR Partners’

contextually situated expert assessments, desk research review and a questionnaire survey, we have brought together multiple strands of knowledge from a variety of sectors. The report has identified and considered the complex barriers in the path of energy efficiency investment in this part of the housing stock, as well as the integrated solutions that can help address them. We have also identified examples of good practices across Europe, while highlighting how successful initiatives to reduce energy poverty go hand in hand with wider interventions in how energy and housing are lived, experienced and regulated. In practice, this necessitates direct engagement with relevant housing residents, institutional stakeholders, and landlords.

Results from the primary survey interestingly found that across the board, financial barriers were consistently rated the most important barrier to implementing policy, regardless of gender or sectoral disaggregation – except for policymakers, who deemed political barriers to be the most important. Another key finding was that generally, policy awareness was low to fair, which corresponds with this being an understudied and relatively invisible sector, particularly in its lower-income and more vulnerable segments.

A common theme running throughout our analyses and recommendations is that solutions to energy poverty in the private rented sector are ultimately social, political and regulatory – they require acknowledging the inequities generated by wider systems of production and consumption, and recognising how energy use is bound up with the practice of political and economic power. Using artificial and subjective notions of “barriers” can also hinder cross-disciplinary, multi-sectoral engagement, resulting in siloed thinking, when in reality, the barriers and their solutions cover technical, political, social and financial issues, and cannot be viewed in isolation. Although a practical way of identifying structural factors that can prevent investment in energy efficiency, this is where we reach the limits of the conceptual notion of ‘barriers’ as an explanatory tool for understanding the persistent energy poverty, housing quality and energy efficiency related challenges. Future research and deliberation might ask the question how scientists, decision-makers and practitioners might develop analytical tools to drive deep systemic change and disruptive innovation in the entirety of the housing sector.

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