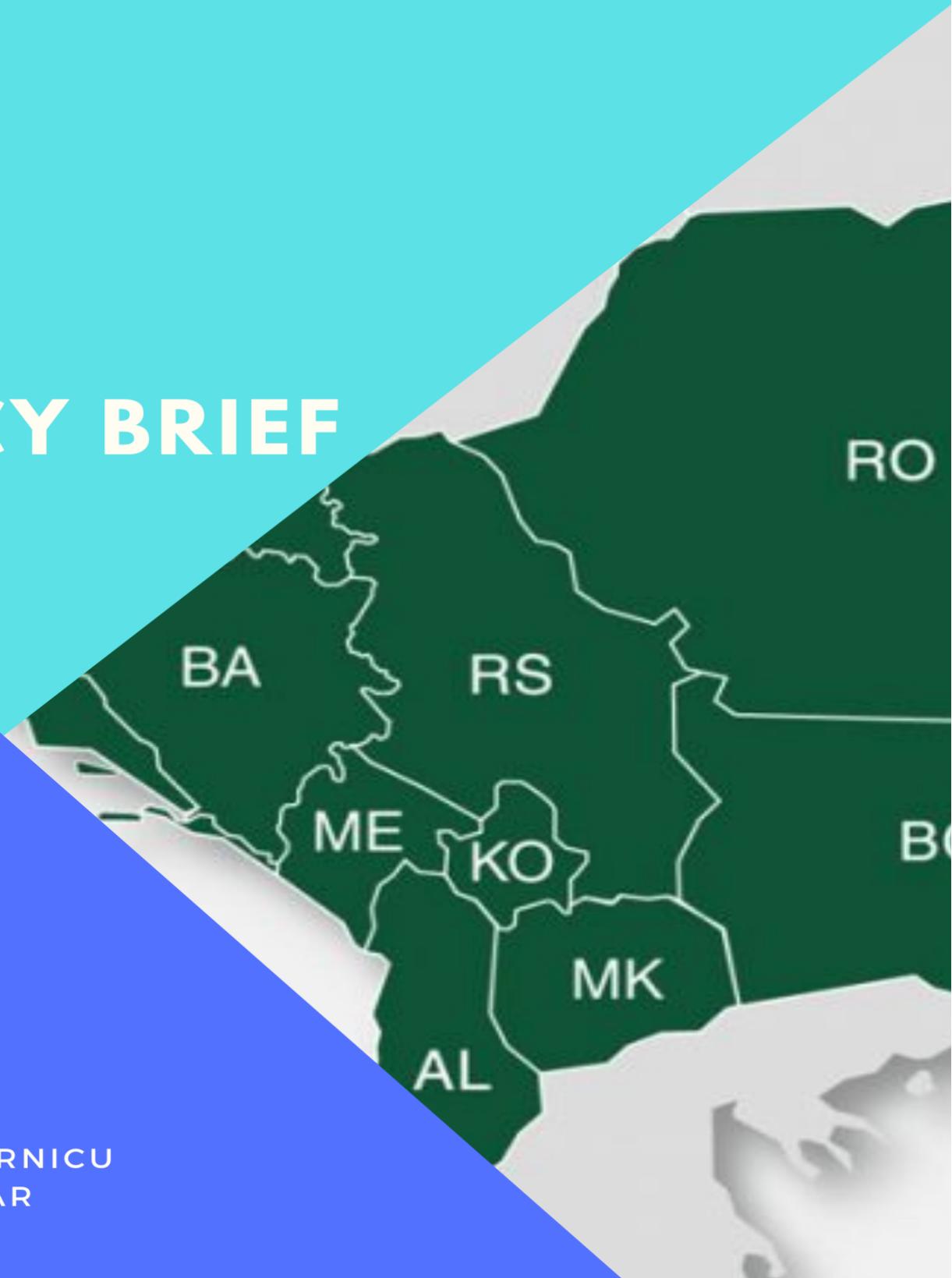


# ENERGY POVERTY IN CEE AND SEE

## POLICY BRIEF

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# **Energy Poverty in CEE and SEE**

Policy brief

## The European energy poverty divide

Energy poverty is a widespread phenomenon in the European Union with over 50 million individuals (Thomson, Bouzarovski, [2018](#)) unable to secure the materially and socially needed levels of energy in their households (Bouzarovski, Petrova, [2015](#)). There are various driving factors at play, such as low incomes, high energy prices, energy market conditions, individual behaviour, efficiency levels of household appliances and building specifications, to name just a few. Over time, various transformations in European policies have aimed at addressing some of these shortcomings. With the Winter Package, European legislation has more coherently addressed energy poverty, as it incorporated the concept clearly, while making Member States responsible for observing and reporting progress periodically in their National Energy and Climate Plans (NECPs). With the European Green Deal, the EU has embarked upon implementing an ambitious roadmap to a net-zero economy by 2050, which requires a just transition process with respect to the purchasing power of the population. With a lower than 1% per annum renovation output of an often highly below-standard European housing stock, ambitious programmes aimed at delivering a more sustainable building sector are now in view. The related January 2020 'Renovation Wave' initiative waiting to be delivered this autumn aims to boost the pace of renovation toward improved energy efficiency and reduced GHG emissions. **Energy poverty has never been a more relevant discussion.**

The incorporation of the above objectives in the Multiannual Financial Framework 2021-2027 revealed much political divergence across EU Member States, mainly around willingness to assume the burdens and pace of what proves to be a costly structural transition among countries, one with a diversity of head starts in terms of social and economic development. CEE (Central and Eastern European) Member States of the former communist block have mainly raised concerns about and resistance to these costs. Yet, little, if at all, have these political positions pointed out concerns regarding energy poverty in their respective countries, despite evidence showing an indisputable link between energy poverty and many of the topics of controversy (individual welfare, climate-change, economic competitiveness, energy efficiency, social inclusion, solidarity, public expenditure, etc.). It is important to note that, based on EU 2018 statistics, the lowest median equivalized disposable incomes in the European Union were recorded in CEE Member States, including in Croatia, Slovakia, Greece, Hungary, Bulgaria and Romania ([Eurostat, 2018](#)). With a yearly disposable income per household between EUR 6 000 and EUR 10 500 in the latter three most affected countries ([Eurostat, 2018](#)), there is little propensity for households to invest in improved energy efficiency.

Recent accounts point to the minimal understanding of energy poverty (and its dimensions and ramifications) at the level of policy decisions in most CEE and SEE countries. This minimal understanding is highly evident in the number and quality of dedicated policies and programmes. Furthermore, the quality of input from the region in EU policies on energy poverty is also particularly low (Jigla et al, 2020 upcoming). What is more, long-time research points to an energy divide that has a strong historical background (mainly between the former communist bloc and the older Members of the EU) and with considerable implications in the area of energy poverty. The existing powerful social and spatial patterns (Boardman 1991, Bouzarovski and Tirado Herrero 2015, Bouzarovski and Petrova 2015) are not sufficiently captured by existing EU legislation and mechanisms. **Under the circumstances, there is high potential for fracture between European debate, legislation and decision-making on the one hand and the reality on the ground on the other. There is also a high risk that the transition process falls short of achieving its equitability standard (i.e. a just transition).** Nonetheless, data shows that consumers' expectations in CEE and SEE are high with regard to how European policies should deliver benefits for households including improving their access to affordable energy (Eurobarometer, [2019](#), Dubois, [2020](#)). In the

present context, given the policy initiatives under way, and the COVID-19 crisis with new energy poverty implications for the region, challenging the point of rupture between European decision-makers with their normative frameworks and realities on the ground is not only a necessity, but also highly momentous.

### **Energy poverty in the homes of Central and Eastern Europe**

European policy-making and academia almost unanimously localize the core issue of energy poverty in the area of buildings referring to issues such as poor living conditions, inefficient home appliances or inefficient behavior, extended with issues of disadvantaged place of residence or household's lack of access to affordable and diversified sources of energy, type of property tenure, lack of means and programmes to perform improvements, etc. This orientation to buildings is perhaps the most practical expression of the divide across the European Union as it brings together not only what is, in general terms, the different historical heritages, but also differences in household incomes and energy affordability, in social and structural development, in urban realities and in public administration, as well as issues of capacity in policy-making (including the use of European grants and other financial programmes), legislation, institutional incoherence, to name a few.

The European Energy Poverty Observatory data ranks post-communist countries as among the most affected by energy poverty with its core manifestations resting around housing quality. This is illustrated by the high percentage of households that are unable "to keep homes adequately warm" such as is the case for Bulgaria (33.7%) and Lithuania (27.9%), which have the highest levels in the European landscape, followed by other Southern and Central European countries: Greece (22.7%), Cyprus (21.9%), Portugal (19.4%), Romania (9.6%), Croatia (7.7%), Latvia (7.5%) and Hungary (6.1%) (EU-SILC, [2018](#)). Under the circumstances, indoor living spaces can become unfit for decent living all year around. In Bulgaria, for instance, over 42% of households are uncomfortable in winter, whereas more than half of the dwellings cannot be properly cooled in summer. In Hungary, EU-SILC (2018) data indicates that 23% of the population lives in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames of floor. For most of these households, improvements are unlikely, given the costs involved and the limited available budgets. In Romania, for instance, almost 50% of the housing stock is made of old, low quality wood-based material. The investment needed to adequately improve efficiency can be higher than the market price of the property involved (Sinea et al., 2018).

These conditions result in a variety of coping strategies such as postponing paying energy bills, sometimes indefinitely, reducing consumption to drastically low levels, or giving up on other daily needs after having prioritized energy expenses in the household budget - even in families with children. Field research in the region shows that this is common (Jeliazkova et al, 2020, Sinea et al, 2018). Accordingly, "arrears on utility bills" are highest in Greece (35,6%), Bulgaria (30,1%), Croatia (17,5%), Romania (14,4%) and Hungary (11%) where a large proportion of the population cannot afford to pay on time (Eurostat, 2018). In Bulgaria, around 50% of the population has difficulties in affording the costs for a normal, comfortable and healthy levels of heating (EnEffect, 2019) as expenses for housing, water, electricity, gas, and other fuels accounted for 19.9% of total household expenditures in 2018 (Jeliazkova et al, 2020). At times consumption is reduced to drastically low levels, especially in the case of the poorest strata of the population. Over half of the lowest income decile in Romania and 44% of the lowest income decile in Poland had extremely low energy consumption in 2015, indicating drastic rationing or the use of low-cost and improvised fuels for heating and cooking (such as rags, scrap wood, etc.) (Dubois, [2020](#)).

### **The heritage of the communist housing facilities: Low energy efficiency and the lock-in effect**

The CEE and SEE housing landscape is dominated by multifamily and, to a more limited extent, to single-family (i.e. Hungary) panel buildings, erected in waves between the 1960s and 1980s to uphold the massive industrialization and urbanization process of the communist era. The effort was pursued under a specific type of systematization and economic logic that included the development of massive supply systems, including for district heating and gas. These low-efficiency, fast-to-assemble panel buildings relied on heavily subsidized energy and housed thousands of formally rural families. They are present across the region. With the fall of communism, the landscape witnessed the challenges of transition, which left these housing facilities utterly unrestored, resulting in a deteriorating building stock and degraded district heating systems. In Hungary, where 50% of housing facilities were built before 1990 (Tirado Herrero et al, 2013), statistical data register it as having one of the highest levels of household energy consumption in the European Union (ranking in the top ten out of 27 in terms of energy consumption per square meter, according to Herrero and Ürge-Vorsatz, 2010, ODYSEE-MURE). Based on the 2015 data from the National Statistics Institute, more than 18% of Bulgarian dwellings are made from concrete panels, accounting for approximately 27% of homes in urban areas and around 1% in rural areas. Among this housing stock, around 10% need immediate intervention (Jeliaskova et al, 2020). In Romania over 70% percent of urban dwellings are in multifamily apartment blocks, of which the largest share were built during the communist era (World Bank, 2015). Based on an evaluation of the Romanian building stock, statistically speaking, the type of residential buildings most prone to lead to energy poverty are apartments built of concrete panels using an individual gas boiler (Sinea, 2018).

There is a diversity of challenges related to achieving satisfactory climate-friendly living spaces in concrete panel housing. The energy consumption inefficiencies of these buildings lead to important climate effects. Combined with rising energy prices resulting from the privatization of utility companies, progressive energy market liberalization, the evolution on the international market, and, in some cases, dependence on fuel imports, consumers eventually became captive in a situation combining low incomes, high consumption, soaring prices, degraded energy systems with debts accumulating all along the energy chain, lack of investment and high politicization. With little alternative, consumers are forced to employ various coping solutions. In Bucharest households use electric boilers as a backup to serve their hot water needs throughout the year. This is an expensive method, but the only one available. The situation of Bucharest is by far the most critical in the region with losses of over 1400 tons of water/per hour in 2020 (Nicut, 2019), repeated heating and hot water supply service failures during high season (Sinea, 2020), and high pressure on production due to excessive consumption and losses. It is a crucial topic that has majorly contributed to voting administrations out of office. Today there is increasing confidence that the complete failure of the system, at the expense of the 1,21 million consumers, is inevitable. In Bucharest interventions have been piecemeal, either through installing individual meters or through replacing damaged pipes. Grant enquiries have been developed for a massive system upgrade but the financial and administrative complexity of the matter have so far blocked any solution. In Bulgaria there is no straightforward agenda for upgrading district heating systems. Bucharest relies mostly on gas for heating but other cities in the region use highly-polluting lignite and other hydrocarbons (Ürge-Vorsatz *et al.* 2006), which, under the pressure of high consumption and intrinsic losses, become important sources of negative environmental and health externalities.

Much of the inefficiencies in the residential sector is also related to improper user-behaviors. On the one hand, despite rising energy prices, wasteful practices reminiscent of an era of heavily subsidized fuels still persists across the region. On the other hand, partial and temporary room heating is also common practice in Romania. More than half of the population heats their home partially (Ministerul Energiei, 2016). Heating below standards at times, or over-heating are much employed coping practices.

Renovation programmes in urban multifamily residential areas have been established in these countries through various national programmes, especially with the accession of European funds after acquiring EU membership. However, accomplishments have remained unsatisfactory with under a quarter of the planned energy performance works in houses having been accomplished between 2014-2020 in Romania (EU, [2020](#)), under 8% in Bulgaria (EU, [2020](#)) and under 2% in Hungary (EU, [2020](#)). National experts maintain that improvement targets have usually not been set around energy poverty nor have the improvements completed been measured for savings.

### **The residential contrasts: Urban versus rural energy poverty and the massive consumption of solid fuels**

While countries in the region experienced massive urbanization during communism, a large number of people still live in rural areas. Relative to urban dwellers, these rural households are particularly vulnerable due to four main types of issues: reduced renovation investment, reduced incomes, limited access to an affordable and diverse set of energy alternatives, and low policy-making capacity.

While almost a quarter (22.8%) of European citizens live in the rural areas, in CEE and SEE the proportion varies between 40%-50%, with Lithuania registering more than 56% (Eurostat [2015](#)). Furthermore, data indicates that there is a higher chance for people living in rural areas to face the risk of poverty and social exclusion. These probabilities are comparatively higher for former communist states. According to the European Energy Poverty Observatory (EPOV, 2018), there are twice as many utility arrears in the thinly populated areas (14.4%) than in the densely populated regions (7.9%).

Where residential retrofit investment programmes have been implemented, these have mostly targeted urban households. In rural areas, investment needs have remained high with some of the highest building inefficiencies to be found here. This is mainly due to the lack of national vision for the development of the rural and suburban areas (Jigla, Sinea, Dubois, Biermann, [2020](#)). Field research has found that local administrations lack the capacity to apply for financing and to navigate the complicated legislative frameworks of what are still over-centralized state structures (Sinea et al, 2018).

Moreover, various studies (Sinea, et al, 2018, Petrova, 2014) indicate that rural areas face structural challenges in terms of access to modern energy services compared to urban and semi-urban landscapes. Access to gas is much more limited than for electricity. According to one study, in Romania only about 33% of the households have access to gas; these households are mainly in high-density urban or suburban localities that are close to gas extraction sites or are geographically more accessible. In rural areas renewable technology is used only marginally. Over 80% of rural households as compared to 12% in the cities are limited mainly to the usage of wood despite being located at short distances from the gas network. The situation is more nuanced in Hungary, where despite a gas network coverage of 91.2% of the localities and 72.9% of the households, around three quarters of rural households use wood or other fuels for heating (Bajomi et al, [2020](#)). Low incomes, especially for single families and the retired, and poor thermal efficiency of homes force people to limit their energy consumption and confine them to a state of hidden energy poverty (Bajomi et al, [2020](#)). Most households in Bulgaria use either firewood (34.1%), electricity (28.8%) or coal (19.9%) for heating. There is again, however, an important fuel gap between the rural and the urban. Village dwellings use mostly solid fuels for heating (62.8% of firewood and 32.5% of coal). The share of electricity for heating is minimal (4.1%) in rural areas, while the use of other types of renewables is rather an exception. In cities, the distribution is closer to the national one.

Biomass-based consumption for heating exposes households to various risks. From a financial point of view, firewood can become a disproportionate expense in a monthly household budget. Being generally a deregulated market, with the exception of Lithuania (Murauskaite, [2020](#)), wood prices can

soar during the high season, besides having been on a constant rise for over a decade. But many are forced into this option because alternatives are either non-existent or inaccessible. Many lack the means to connect to the grid or to commit to a permanent service contract due to very low or uncertain incomes. In Romania, before the recently legislated waiver, connection costs were the equivalent of one monthly salary (Sinea et al, 2018). At the same time, fuel prices vary across the region from the lowest average price on gas in Romania (EUROSTAT, 2019) to higher rates in Czechia. However, related to the purchasing power of the population, general concerns have been raised with regard to the price factor in terms of energy poverty (Jigla, Sinea, Dubois, Biermann, 2020).

Other concerns related to the burning of wood and other solid fuels are their important health and environmental hazards with particularly negative effects on vulnerable groups. The low quality of the fuel-burning stoves used, the high polluting potential of the burning material - insufficiently dried wood, residue and other types of fuels employed - can lead to dangerously high levels of indoor and outdoor pollution. Such effects have been noticed across the region (Jigla, Sinea, Dubois, Biermann, 2020). A 2020 EEA report notes that CEE is particularly exposed to such effects with high numbers of deaths attributable to air pollution (EEA, 2020). In Romania outdoor pollution due to the residential sector is 6,2 mil. CO<sub>2</sub> and 7,2 in GHG emissions, the residential sector being one of the highest contributors to air pollution in the country (ANRE, 2019).

### **The dilemma of the owner: energy poverty and the high property ratio**

CEE Member States have a much higher property ownership ratio than Western European Member States, another legacy of communism and transition to democracy. At the beginning of the 1990s most housing units were inhabited by tenants who benefited from “giveaway” privatization programmes, in which sitting tenants were preferred and encouraged to purchase the properties they have lived in through various forms of programmes and payment schemes (European Housing Partnership, 2017). In addition, former private landlords and their successors received in-kind compensations or other forms of material benefits to substitute their loss. Romania leads the private property ratio with 96%, whereas Slovenia has the lowest share of ownership in the region (67.3%) (Csiba, Bajomi & Gosztonyi, 2016).

This situation leads to a number of challenges, related to the capacity of owners to preserve and improve the quality of their buildings given the low efficiency of the housing facilities and the low household income shares available for investments. This limited investment capacity has also led to a common situation where several generations live under the same roof, causing increased wear of the property and an overcrowding of the living space. According to Eurostat (2016, p.56), more than 40% of the population from Hungary, Poland, Slovakia, Croatia, Bulgaria, Latvia and Romania (48.8%, the highest share at EU level) lives in overcrowded households.

Legislation on the improvement of the building stock has been scarce. Some local administrations take initiatives to improve facades, whereas renovation programs have been few as compared to existing needs. The lack of development vision and administrative capacity at the local level (reminiscent of the centralized administrative mentality) was conjugated with a strong ownership mindset that discredited any type of policy-making or common initiative on the topic. What is more, the implementation of refurbishment projects at the level of multifamily buildings has been slow as it involved, if not a financial contribution, common decision-making in tenants associations; this decision-making is difficult to generate due to common low associative culture and general mutual mistrust (Jigla, Sinea, Dubois, Biermann, 2020).

In many of these countries, the rental market, comparatively smaller in size, has remained largely unregulated with little leverage on the landlords to improve the efficiency of their let apartments.

Landlords and renters alike, commonly prefer a cheaper arrangement based on an informal contract in order to avoid taxes and other bureaucratic matters, and do not find the benefits of a legal contract particularly attractive.

### **Energy poverty in the urban pockets: the Roma outskirts of the rapidly developing cities**

Around 6 million Roma live in the European Union, representing the largest and the most marginalized minority in the region (World Bank, [2015](#)), and one with the highest risk of falling into a state of extreme poverty. CEE and SEE states have the largest communities, with Romania hosting the highest population of Roma citizens at anywhere between 1 to 2 million people (World Bank, [2015](#)). In Bulgaria, Hungary, and Romania, for example, Roma poverty rates are between 4 to 10 times higher than that of their non-Roma fellow citizens. If they fall in extreme poverty, there are fewer opportunities available for social mobility (ERRC, [2002](#), World Bank, [2015](#)). In the former communist countries, Roma vulnerabilities have been exacerbated by the transition to democracy, involved their economic and social disempowerment along with limited political and administrative engagement. Due to their lower level of education and human capital or generally, the Roma were the first to lose their jobs after the fall of communism. In addition, the succeeding economic crises only deepened their previous situation of precarity. Moreover, the housing crisis, which resulted either in their evacuation or in the reduced ability to improve their living conditions, led to new types of energy poverty, many of which can be described as extreme (Teschner, 2020) given the low-efficiency and, at times, improvised dwellings, isolated in deep poverty pockets of otherwise thriving cities, further restricted by an impossibility to connect to the grid, use or pay for public utilities (World Bank, [2015](#)).

Around 100 000 people, most of them Roma, live in the Ferentari district of Bucharest, mostly in highly degraded, concrete panel apartment buildings, usually overcrowded. While some residents own their apartments, others live in illegal properties or shacks. A few of these buildings have been refurbished. The provision of public services is scarce and unreliable. Between 30% and 70% of the households in the Ferentari district cannot keep their homes adequately warm during winter and 50% of them cannot afford to pay the utility bills (Teschner et al, [2020](#)). The landfill at the outskirts of Cluj-Napoca hosts up to 2 000 people with little economic opportunity (Badita, Vincze, [2019](#)). Some of them have been evicted from social houses in the city centre, and others have erected unauthorized huts with no access to water, sewage and electricity (Teschner et al, [2020](#)). They have developed informal electricity consumption practices as one connected home sells electricity to third parties at extortionate prices without any form of commercial or safety protection. For heating, people mainly use wood and waste burned in suboptimal heating facilities. This energy poverty situation of the Roma, as described by a recent study, is almost identically replicated around the region. In Hungary 55% of Roma face severe material deprivation, with their houses in worse conditions than the rest of the population (Central Statistical Office, 2016). Their settlements are strongly marginalized from the majority communities and have limited access to amenities (Bajomi, et al, 2020); 81% of them heat their households using firewood (FRA and UNDP, 2012).

A number of drivers are at work. One of the most important is the state of informality as many pursue their daily lives without valid documentation. Most of these countries condition access to energy or heating benefits upon the possession of property and identification documents. Forced evictions have contributed to deepening of this problem as political engagement in these communities is low. As a result, individuals feel disenfranchised, abandoned, and distanced from bureaucratic processes which they do not understand. Most often, the energy relationship with suppliers and authorities is one of conflict resulting in repeated forced disconnections and lawsuits, only rarely with serious engagement and solution-finding approaches (Teschner, 2020).

## The energy poverty challenges of the COVID-19 crisis and the way forward

The current coronavirus crisis has brought new energy poverty challenges to the region, discharging new drivers without dismissing the already existing ones. CEE countries have become particularly exposed due to the little safeguards available. The pandemic shows once again that energy and energy services are essential ingredients for a safe, healthy and decent life. Energy poverty exposes several vulnerabilities. Energy-poor people are more vulnerable to physical health issues. At the same time, energy poverty is associated with a variety of other issues of inequality and social (in)justice, including more restricted access to education and lower welfare in general. Energy poverty has differential impacts depending on the group, such as for women, Roma, etc. All of these issues are highly relevant during the coronavirus pandemic, which has produced wider effects than those related to public health, with profound and likely long-term socio-economic consequences. Pre-existing factors of energy poverty have amplified due to the reduction or loss of revenues, and bills have increased due to higher energy consumption from spending more time in the home. From a medical point of view, the effects of the virus are exacerbated by pre-existing medical conditions, some of which are also associated with energy poverty. This means, energy poverty is now putting increasing pressure on household budgets and public finances. Policy responses have been diverse with some countries taking punctual steps to prevent the deepening of energy poverty and its effects under the pandemic, others have taken more general approaches, a third category have wavered during the hectic development of events, whereas others have not taken any measures whatsoever. It is clear however, that due to their socio-economic context and previous energy poverty situation, CEE countries are comparatively more exposed ([here](#)).

### **Opinion on the “A Renovation Wave for Europe - greening our buildings, creating jobs, improving lives” from a CEE and energy poverty perspective.**

The Commission Communication on the Renovation Wave for Europe (RWI) is a flagship initiative aimed at improving the quality of the building stock across the European Union. RWI consolidates existing policies and proposes new ones, building on lessons learnt, making a clear commitment to address energy poverty in the housing sector through energy efficiency measures. Energy efficiency has been recognized as generating improvements in dimensions as diverse as economic growth and sustainable development, climate change, resource management, and public budgets (by targeting environmental hazards, health hazards, poverty etc.); it can also create visible improvement in the quality of life of citizens, especially among energy poor households.

While RWI touches on interventions for energy poverty in the area of construction generally, tackling energy poverty in buildings requires targeted policy instruments that take into account its distinct manifestations at various levels. As a first step, this requires systematic collection of building-related and socio-economic data to allow for intervention based on the level and nature of needs. It is also important for EU strategies and legislation to recognize a more diversified set of interventions ranging from minor or major retrofitting, replacement of appliances and low cost energy savers (such as light bulbs), social measures, to energy-saving behavioural change and coherence across legislations (such as dealing with informality or the appropriate regulation of the rental market). This would allow for a more diversified set of measures and financial instruments to be employed on a case-by-case basis to target energy poverty.

Given the energy poverty divide within the EU, with CEE and SEE Member States more affected than those in the West and North, it is useful to **single out a number of challenges in the region that remain insufficiently addressed by the RWI**, and which need to be taken into account when designing the corresponding legislation, in order to secure equity in reaching clean economy transition goals.

1. **Mandate clear quotas for energy poverty action.** As part of the Modernization Fund, the EU needs to include an obligation for Member States to primarily target energy poor households. This commitment should be part of the national long-term renovation strategies, including clear annual quotas on the total number of energy-efficiency renovations that are measurable and verifiable at the end of each programming period (and the interval between reporting periods). Incentives for the Member States to adhere to their commitment should be designed. The EC should reaffirm the obligation of Member States to define and measure energy poverty in their national settings.
2. **Implement comprehensive data-collection systems at the national level.** It is important, but not sufficient to target low-efficiency buildings (energy efficiency classes D, E, F, and G) to tackle energy poverty. Energy poor households need to be identified at a junction of structural, socio-economic and contextual factors. This should be enabled through EU-wide **unified data collection systems** to compile building, socio-economic, and consumption data, ideally coordinated at the level of individual households. This would allow for a better understanding of the phenomenon of energy poverty, and accordingly better target-setting, solutions, and progress toward targets.

The **Digital Building Logbooks, Building Renovation Passport and the Energy Performance Certificates (EPC)** are important data collection instruments. However, these are either exclusively European data depositories or instruments that only gather building-specific information with no insight into energy poverty.

Innovative systems of data collection that include energy poverty-relevant information are under way in some Member States and are being employed by various governmental or non-governmental entities in small-scale projects, including in the CEE region<sup>1</sup>. EC coordination on possible data collection systems, based on good practices, would speed up the process considerably and validate solutions that work and that anticipate a variety of possible challenges, such as compliance with the General Data Protection Regulation (GDPR).

Data collection systems should be applied at the lowest level of public administration and designed to compile automatically at the national and even European level for better decision-making and policy results.

3. **Raise key stakeholders' awareness of energy poverty.** Energy poverty reduction requires concerted action from all relevant stakeholders, public and private. The EU needs to address existing limits through awareness-raising instruments and incentives. Private utilities, for instance, are reluctant to share consumption data for buildings and do not have a stake in energy efficiency improvements or energy poverty alleviation in households, at least not beyond the minimal Government requirements under the Energy Efficiency Directive. Energy poverty requirements are generally minimal, if existent, whereas volume-based profit is still the dominant business mentality. It is important to note that some of the key energy companies in the region have some form of foreign investment and thus international management and international corporate policymaking. As a result, the policy approaches and interests of subsidiaries are largely determined by their international management and can be influenced by European awareness-raising, policymaking and policy engagement to become proactive in the field of energy efficiency improvement in end-users, especially given the December 2020 deadline on the implementation of energy efficiency obligation schemes.
4. **Consolidate and build capacity at the local level.** Energy poverty has remained a national task. Notwithstanding the importance of the national governments, **initiatives should happen at the local level and local administrations should be enabled to act. EU strategies should recognise the key role of local administrations and ensure the**

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<sup>1</sup> [EnPowerR](#)

**appropriate action framework.** Local administrations possess knowledge about local nuances of energy poverty and their most vulnerable populations, including the Roma communities and others outside urban areas. These local administrations also have a better understanding of the state of the building stock. It is at these local levels that it makes sense to mobilize targeted resources and build trust. However, the administrative capacity of local decision-makers to act is particularly limited. The EU should put more pressure on national governments to address these limits through reform and more efficient administrative instruments.

One-stop shops should be set up with a wide set of tasks: to collect data, identify needs, inform the relevant population and guide them through a simplified process of grants application. EC and EIB funding should be secured to allow for funding of these one stop shops at sufficient levels. Funding should be accompanied by technical guidance to ensure an integrated and simplified bureaucracy. The size and geographic distribution of one-stop shops should be determined based on population size in order to cover needs effectively.

5. **The EU should provide energy poverty targeted funding.** The EU should design funding instruments that target energy poor households. Typically, energy poor **households are unable to access funds on the market, whereas the available public alternatives** require either co-funding, which they cannot provide, or do not priorities vulnerable consumers at all. Funding needs to be available both as refundable instruments (such as loans guaranteed by the state) and as non-refundable grants. Energy poverty is regionally concentrated with regionally specific traits, including challenges of urban and rural areas and marginalized communities. Sufficient funding should be dedicated to addressing energy poverty in these settings specifically.
6. **Priorities socialist-era multifamily buildings for energy efficiency improvements, recognizing their complex energy poverty challenges.** In urban areas of CEE and SEE prefabricated multifamily buildings present an immediate challenge. These buildings and their complex energy poverty challenges should become a distinct point of discussion.

Most of these buildings are parts of neighborhoods of similar apartment blocks. It would, thus, make sense to prioritize sectors with similar construction in order to reduce costs based on interventions of scale.

General mistrust between neighbours, or towards the public administrations and other key stakeholders have been rightfully recognized by the RWI in the general context of energy efficiency interventions. Such attitude is very typical of multifamily buildings in CEE and SEE and has been an important barrier due to the unwillingness of some of the households to pay their share of co-funding. Recognizing energy poverty as part of the problem might allow for more progress on the topic. Energy poor families have a general tendency to mistrust their community; they are often insecure, reluctant to display their vulnerability and do not possess the individual contributions necessary to access funding. Funding instruments and the implementing bodies could make available contribution waivers or zero-participation financing solutions and trust-building instruments.

Another urban-area challenge of the CEE and SEE region is the district heating problem, for which the RWI and other EU legislation (i.e., the Affordable Housing Initiative) do not offer sufficient recognition. As is and without additional guarantees and technical support, the existing funding sources under the cohesion programmes can sometimes not be applied to accommodate high-scale challenges. Such an example is the Bucharest district heating for which no viable solution has been found for decades due to an interaction of complex legal, financial, administrative and political issues. The situation has rendered the population in a state of crisis (typical of energy poverty) with no possible way out in view. This situation and similar ones in the region should be considered emergency circumstances and should be dealt with specifically in order to find proper, functional solutions which local administrations and national governments have been unable to solve. It has become clear that programmes

that have functioned well with some district heating systems have not functioned in others due to the scale of the problem. Given the urgency of the issue, there is need for more understanding of these particular challenges and for an immediate response.

- 7. The need for clear minimum efficiency standards for all buildings is essential and should be generally reaffirmed, with their implementation observed and accounted for.** Currently there is still an under-implementation of the European energy efficiency standards at the local level as local authorities observe the compliance with these norms superficially. Private homeowners and developers are still able to circumvent what are generally seen as low-expense energy efficiency requirements with an important energy efficiency impact, in order to reduce their investment costs while renovating existing buildings or building new ones.

Nevertheless, **beyond this general situation there should be a clear vision with regard to buildings that cannot be brought to standards without unreasonably high costs** due to the technical difficulties involved. Many of the socialist-era blocks find themselves in this situation as national refurbishment programmes have only succeeded to bring them to standards inferior to those required due to the refurbishment needs that exceeded investment rationale. This is also the case with individual households. Individual houses have been marginally, if at all, targeted by renovation programmes. Many of them need deep rehabilitation due to their advanced state of degradation, lack of investment over time or the lack of observance of building criteria while performing small refurbishing works. This is especially the case in the rural areas, where there has been little integrated vision for development programmes, and where the reach-out of building authority is scarce. The investment needs of these houses can rise beyond their market value, whereas families generally lack the means to perform these works or do not understand the need to do so as they have learned to cope in this situation over time.

- 8. prioritize CEE and SEE rural areas for energy efficiency given their important energy poverty challenges.** The RWI rightfully recognizes the importance of rural settings and remote areas and pinpoints various funding options. However, the EU needs to make sure that the available funding is proportionate with the complexity of the specific issues and that in the funding programmes accessed by CEE countries, a fair share is destined for rural localities, as energy efficiency measures in rural areas are currently not prioritised by countries in the region.

Beyond allocating the right amount of funds, the EU should make sure that national decision-makers effectively incorporate these rural and suburban environments in their plans, and that EU targets related to suburban and rural households are set and that address many of the challenges these households are facing (such as low-quality housing, inadequate heating facilities and a lack of access to diversified and accessible resources).

- 9. Develop a transitional perspective on solid biomass that includes due regard to rural and marginalized communities.** The deployment of energy communities and renewable energy sources are options that have been suggested in RWI. However, it is not clear if these investments are cost-efficient and sustainable given the low value and often deteriorated state of the destined buildings in rural and marginalized communities. The automations associated are highly complex and they require a high degree of technological knowledge, whereas the organizational model of energy communities might take time to function in practice as they require cooperation. Cooperation is typically absent in these communities. Given the wide cleavage between the countryside of the West and those of CEE and SEE, interventions cannot be applied indiscriminately.

Reasonable and financially acceptable solutions should be found for these regions. The Commission must take into account that in most CEE countries a significant share of renewable energy is generated from solid biomass which is mostly burnt in outdated stoves in homes that do not meet basic energy efficiency and emissions standards. As it is, European renewable legislation turns a blind eye to the unsustainable use of biomass. Member States

should be incentivized to reduce biomass consumption through the implementation of more efficient heating systems; instead they are incentivized to keep biomass consumption at high levels as this helps them meet their renewables targets. Deploying wood heaters that meet appropriate emissions standards and use sustainably sourced biomass should be a minimum requirement.

The development of energy networks available in the proximity and the waiver of connection costs can be short term provisional solutions for low-income households in the process of transition to more effective and sustainable technologies and should equally qualify for efficiency financing, especially when they contribute to a considerable improvement of the energy efficiency of the households. These funding opportunities shall be conditioned upon a comparative cost evaluation with other more sustainable alternatives possible in the given situation.

More dialogue is needed to establish suitable approaches for rural communities and for the urban poverty pockets in CEE and SEE. They should be reasonable in terms of upfront costs and technological complexity, and capable of delivering benefits for these households in the short term.

10. **Mainstream energy poverty into all EU policies and legislation.** The implementation of complex, high-efficiency technologies, as provided for also in the Ecodesign Framework Directive, will put a financial burden on vulnerable households for the long term. Low-income households rely on the least efficient and cheapest devices to provide energy services in their home. When these will be phased out (in 2022), even the cheapest new-generation devices will cost significantly more than the ones currently in use. Hence, the lowest-income households will be locked in even longer to using the old inefficient technology and won't be able to change their devices, resulting in increased health risks (e.g., accidental fires) and air pollution.
11. **Address urban and rural pockets of extreme energy poverty.** Across CEE and SEE in urban and rural landscapes alike the issue of extreme energy poverty is highly pervasive: widespread communities of partially completed single-family houses that are already in bad shape, or even self-erected shacks with hardly any potential to allow for secure and comfortable living, flats in deplorable conditions in marginalized urban pockets are occupied by extremely vulnerable families, among which are many Roma. Here, the state of the buildings combines with a high degree of informality and complicated property situations. This renders the legal renovation of most of these buildings impossible even when funds are made available. These households find themselves in much more complex situations of energy poverty than normally seen, as public utilities are generally unreliable or even absent. Encompassing solutions need to be identified to overcome these problems. This topic should become an object of conversation across the CEE and SEE Member States under the initiative of the European Commission to find overarching solutions based on local knowledge, rather than to allow these issues to remain ignored.
12. **Define clear minimum efficiency standards for all buildings while implementing a safety net for cases where they cannot be fulfilled.** Minimum efficiency standards should remain essential, with their implementation observed and accounted for. However, regulation needs to accommodate the fact that some households cannot implement these standards due to the technical situation of their house and the affordability of the upgrades required. Privately-owned single-family houses are especially at risk. European funds should be dedicated to ensuring this safety-net and also include single-family houses, which have so far minimally or not at all benefited from national retrofitting programmes in much of the CEE and SEE region.

13. **Address the housing market through legislation.** The RWI recognizes and offers energy efficiency solutions for a diversity of legal occupancy situations. There are, however, various occupancy situations common for CEE and SEE Member States that are not discussed in the document.

While home ownership is predominant in these regions, there is also a rental market that is highly informal. Without rent-control mechanisms and without compelling incentives for parties to enter into legality, the deployment of energy efficiency measures will remain marginal in the rental sector with important negative implications for the occupants. The owner-tenant barrier to energy efficiency investment is significant. In addition, occupants are also disempowered through their illegal status and are unable to demand better living conditions based on contract obligations. Landlords may provide better facilities (an individual boiler, UPVC windows, etc.) but while doing this they do not comply with any energy efficiency criteria and typically buy the least expensive facilities available on the market. Moreover, illegal rentals allow for landlords to escape the energy audit obligations imposed on rentals. Landlords should be, therefore, incentivized to invest in energy efficiency measures and to take steps to leave the grey market in order to be able to access funding and improve their property value from an energy efficiency perspective, while not translating these investments into higher rents for tenants.

Illegality is an additional important problem, especially for marginalized and extreme energy poor communities with sizeable Roma populations. For decades, the issue has been minimalized and handled commercially and legally with no significant improvement in the situation of these communities. It has led to continuous evictions and forceful disconnections from the grid or the impossibility to connect to energy networks altogether and the rise in illegal consumption. Lack of clarity with regard to ownership and the transfer of maintenance responsibility is a barrier to retrofits. Absence of legal clarity can also disqualify these households from social entitlements such as heating benefits.

The EU might not have the legal prerequisites to clarify these situations, which remain in the hands of the Member States. However, the extension of the list of legal situations mentioned in the RWI with at least these two new categories – informal rental markets and illegal situations - typical of CEE and SEE, is an important act of recognition, one that may lay the foundation for a much-needed European dialogue regarding suitable solutions.

14. **The building energy efficiency concept of the Renovation Wave Initiative should be extended to incorporate measures for replacing home appliances and adding low-cost energy upgrades (such as efficient light bulbs).** Few CEE and SEE Member States have so far implemented consistent interventions of this kind and the quality of household amenities lags behind that of Western and Northern Europe. National governments should be encouraged to design small-scale intervention programmes and to allocate funds for a more extensive upgrade of household appliances, including heating stoves or heating systems. The NECPs report national evidence of the state of these household amenities. Based on these reports, a timeline should be established, with progress on their upgrading recorded and reported as part of the European obligations.

Out-dated household technologies are responsible for high energy consumption and pollution and are focal energy poverty in CEE and SEE. There are already important funding programmes mentioned in RWI; however, their limitations are evident. A significant share of low-income households would **not be eligible for on-bill financing**, as their primary energy source is **biomass** that is not acquired through utility companies. Additional solutions to bridge the funding gap are therefore necessary. The wide-scale and cross-technological implementation of buy-back programmes, low-rate loans and other such schemes implemented through businesses; large-scale energy audits destined to low-income families

and the associated roll-out of low-expense energy saving products (i.e. light bulbs, timers, thermostats, faucet aerators, etc.) and energy behavior advice, and further programmes that have been tested in small-scale projects should qualify for funding. Furthermore, coupling building interventions with appliance-purchase measures would allow for more comprehensive and inclusive efficiency actions. Given the scale of the issue, these appliance-related interventions, which are comparatively less costly than building upgrades, have a higher impact potential in the region.

15. **Recognize the behavioral and social component in energy efficiency in buildings and reflect these in the design of corresponding European funds and instruments.** This would be another significant step forward and one that is especially impactful for the CEE and SEE region. Here, inefficient behavior is a commonly inherited reality tributary to decades of subsidized energy. Behavioral interventions are low-cost interventions with an important impact potential; however, they have not been considered for funding under the current framework. Advice on energy consuming behaviors should be offered to beneficiaries either separately or in combination with other structural or appliance-related interventions. Implementation of behavioral interventions can take place through a spectrum of actors, private and public, local and national. Social workers could have an important role in offering tailored recommendations. Grants should be proposed to cover a variety of such small or large-scale actions and room should be allowed for innovative solutions.

## Bibliography

Bădița, C, Vincze, E., (2019). Resituating the Local in Cohesion and Territorial Development. Case Study Report, Pata-Cluj Project. Available at: [https://relocal.eu/wp-content/uploads/sites/8/2019/05/25\\_RO\\_Case-1\\_Pata-Cluj\\_Final.pdf](https://relocal.eu/wp-content/uploads/sites/8/2019/05/25_RO_Case-1_Pata-Cluj_Final.pdf)

Bajomi, Z.,A., Feldmár, N., Kőszeghy, L., Trapped in politics: energy poverty in Hungary in Jigla, G., Sinea, A., Dubois, U., Biermann, P. (Eds). (2020), *Perspectives on Energy Poverty in Post-Communist Europe*, Routledge.

Boardman, B., (1991). *Fuel Poverty: From cold homes to Affordable Warmth*, Belhaven Press.

Bouzarovski S., Tirado Herrero S., (2017). The energy divide: Integrating energy transitions, regional inequalities and poverty trends in the European Union. *European Urban and Regional Studies*. 24(1):69-86.

Bouzarovski, S., Tirado Herrero, S., Petrova, S. & Ürges-Vorsatz, D., (2016). Unpacking the spaces and politics of energy poverty: path-dependencies, deprivation and fuel switching in post-communist Hungary, *Local Environment*, 21:9, 1151-1170

Bouzarovski, S., Petrova, S. (2015). A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary, *Energy Research and Social Science*. 10:31-40.

Central Statistical Office, (2016). A háztartások életszínvonala, 2016 [The living standard of households, 2016] 56.

Csiba, K., Bajomi, A., Gosztonyi, A., (Eds.), (2016). *Energy Poverty Handbook*. Available at: <http://bpie.eu/wp-content/uploads/2016/11/energypoverthyhandbook-online.pdf>.

Dubois, U., (2020). Introduction: Energy Poverty and its Drivers in Post-Communist Europe: The Visible, the Measurable and the Hidden in Jigla, G., Sinea, A., Dubois, U., Biermann, P. (Eds). (2020), *Perspectives on Energy Poverty in Post-Communist Europe*, Routledge.

EnEffect, (2019). Centre for Energy Efficiency, Report: Energy Poverty in the Light of Local Elections: What can the state and municipalities do to solve the problem of high heating bills?, <https://www.eneffect.bg/>, (in Bulgarian).

Eurobarometer, (2019). Europeans' Attitudes on EU Energy Policy. Available at: [https://ec.europa.eu/info/news/eurobarometer-survey-confirms-public-support-energy-policy-objectives-2019-sep-11\\_en](https://ec.europa.eu/info/news/eurobarometer-survey-confirms-public-support-energy-policy-objectives-2019-sep-11_en)

European Commission, (2020). European Structural and Investment Funds: Romania. Available at: <https://cohesiondata.ec.europa.eu/countries/RO?fbclid=IwAR0qIj2MTr32yLvAA5LVyN9pInSL16zYruwZoGUj3ZqSA0IT7qJt3iEonr4>.

European Energy Poverty Observatory, (2019). Member States Report on Energy Poverty. Available at: [https://www.energy-poverty.eu/sites/default/files/downloads/publications/20-06/mj0420245enn.en\\_.pdf](https://www.energy-poverty.eu/sites/default/files/downloads/publications/20-06/mj0420245enn.en_.pdf)

European Housing Partnership, (2017). Affordable Housing in Central and Eastern Europe: Identifying and Overcoming Constraints in New Member States. Available at: [https://ec.europa.eu/futurium/en/system/files/ged/2018.10.22\\_affordable\\_housing\\_in\\_central\\_and\\_eastern\\_europe.pdf](https://ec.europa.eu/futurium/en/system/files/ged/2018.10.22_affordable_housing_in_central_and_eastern_europe.pdf)

European Roma Rights Center (2002). Poverty And Roma In Central And Eastern Europe: A View From The World Bank. Available at: <http://www.errc.org/roma-rights-journal/poverty-and-roma-in-central-and-eastern-europe-a-view-from-the-world-bank>.

Eurostat (2018). Arrears on utility bills. Available at: <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20200120-1>

Eurostat, (2018). "Living conditions in Europe - income distribution and income inequality", Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php/Living\\_conditions\\_in\\_Europe\\_-\\_income\\_distribution\\_and\\_income\\_inequality#Key\\_findings](https://ec.europa.eu/eurostat/statistics-explained/index.php/Living_conditions_in_Europe_-_income_distribution_and_income_inequality#Key_findings).

Eurostat, (2018), "Disposable income of private households by NUTS 2 regions", Available at: <https://ec.europa.eu/eurostat/databrowser/view/tgs00026/default/table?lang=en>

Eurostat, (2015). Statistics on Rural Area in the EU. Available at: [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Statistics\\_on\\_rural\\_areas\\_in\\_the\\_EU](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Archive:Statistics_on_rural_areas_in_the_EU)

EU-SILC (2018). Inability to keep home adequately warm, Survey. Available at: [https://ec.europa.eu/eurostat/databrowser/view/ilc\\_mdcs01/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ilc_mdcs01/default/table?lang=en).

EU-SILC (2018). Total population living in a dwelling with a leaking roof, damp walls, floors or foundation, or rot in window frames or floor - EU-SILC survey. Available at: [https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_mdho01&lang=en](https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mdho01&lang=en).

FRA & UNDP, (2012). The situation of Roma in 11 EU Member states: survey results at a glance. Publications Office, Luxembourg.

Jeliazkova, M., Krasteva, V., Minev, D., (2020). Inconsistencies in Policy-Making as Drivers of Energy Poverty in Bulgaria in Jiglau, G., Sinea, A., Dubois, U., Biermann, P. (Eds). (2020), *Perspectives on Energy Poverty in Post-Communist Europe*, Routledge.

Jiglau, G., Sinea, A., Dubois, U., Biermann, P. (Eds). (2020), *Perspectives on Energy Poverty in Post-Communist Europe*, Routledge.

Ministerul Energiei. (2016, 11 15). Strategia Energetică a României 2016-2030, cu perspectiva anului 2050 Versiune preliminară supusă consultării publice.

Nicut, M. (2019, 10 9). Sistemul de alimentare cu apă caldă și caldură al Bucureștiului se autodistruge, încet, dar sigur. Explicații. [Economica.net](http://Economica.net)

Ringold, D., Orenstein, A. M., Wilkens, E. (Eds), (2015), Roma in an expanding Europe : breaking the poverty cycle, World Bank Report. Available at: <http://documents1.worldbank.org/curated/en/600541468771052774/pdf/30992.pdf>.

Sinea, A., Murafa, C., Jiglau, G. (2018), *Energy Poverty and the Vulnerable Consumer in Romania and in Europe*, Presa Universitară Clujeană.

Sinea, A. (2020). On How to Fix a Sturdy Energy Poverty System in Romania in Jiglau, G., Sinea, A., Dubois, U., Biermann, P. (Eds). (2020), *Perspectives on Energy Poverty in Post-Communist Europe*, Routledge.

Tirado Herrero, S., Ürge-Vorsatz, D., Petrichenko, K., (2013). Fuel poverty alleviation as a co-benefit of climate investments: evidence from Hungary, Conference Paper. Available at: [https://www.researchgate.net/profile/Sergio\\_Tirado-Herrero/publication/262048685\\_Fuel\\_poverty\\_alleviation\\_as\\_a\\_co-benefit\\_of\\_climate\\_investments\\_evidence\\_from\\_Hungary/links/551188390cf268a4aae783e8.pdf](https://www.researchgate.net/profile/Sergio_Tirado-Herrero/publication/262048685_Fuel_poverty_alleviation_as_a_co-benefit_of_climate_investments_evidence_from_Hungary/links/551188390cf268a4aae783e8.pdf)

Teschner, N., Sinea, A., Vornicu, A., Abu-Hamed, T., Negev, M., (2020). Extreme energy poverty in the urban peripheries of Romania and Israel: Policy, planning and infrastructure, *Energy Research and Social Science*, (66).

Tirado Herrero, S., Ürge-Vorsatz, D. (2010). Fuel poverty in Hungary. A first assessment. Report prepared for Védegyelet – Protect the Future Society. Budapest: Center for Climate Change and Sustainable Energy Policy (3CSEP).

Thomson, H., Bouzarovski, S. (2018). Addressing Energy Poverty in the European Union: State of Play and Action, EU Energy Poverty Observatory.

World Bank, (2015). Housing in Romania; Towards a National Housing Strategy. Available at: <http://documents1.worldbank.org/curated/en/552171468585744221/pdf/106856-REVISED-WP-RomaniaHousingRASOutputFinalHousingAssessment-PUBLIC.pdf>.