



## Energy Vulnerability Trends and Patterns in Europe

*EVALUATE project policy brief no .2*

**Energy Vulnerability and Urban Transitions in Europe (EVALUATE)** is a five-year European Research Council funded project, underway since March 2013. It aims to investigate the character, prevalence and evolution of energy poverty in European cities. **Energy poverty is defined as the inability to secure a socially- and materially-necessitated level of domestic energy services** (heating, lighting, cooling etc.).

EVALUATE uses a vulnerability framework to study energy poverty, meaning that the **project's emphasis is on the risk factors that may make a given household, community, city or country susceptible to energy poverty**. As a result, EVALUATE focuses on the manner in which urban policies and institutions, the built fabric and everyday practices shape energy use. Using a wide range of data gathering methods – statistical data analyses, household surveys and interviews with key informants – the project interrogates these issues in the context of several Central and Eastern European (CEE) cities and countries.

### **An extensive survey of experts in CEE**

This policy brief outlines some of EVALUATE's initial findings about the institutional and political forces that drive energy poverty. It is based on detailed analyses of documentary evidence (legal acts, policy statements, strategy reports, news items), combined with a total of 168 expert interviews undertaken between April 2013 and March 2015. The interviews included representatives of various government ministries and agencies, local authority employees, independent regulatory bodies, companies and private enterprise, advocacy and lobby groups, residents' associations and housing co-operatives, as well as members of parliament, journalists and academics. They took place in eight CEE cities: Gdańsk and Warsaw in Poland, Prague and Liberec in the Czech Republic, Budapest in Hungary, and Skopje in Macedonia. Additional interviews were also undertaken at the European Commission in Brussels and the Energy Community Secretariat in Vienna.

### **CEE energy transitions are not unidirectional**

Energy transitions can be understood as processes of systemic change in the patterns of energy production and consumption. In the CEE context, such dynamics were originally motivated and justified by the difficult state of infrastructures and regulatory practices in this domain at the end of communist central planning in the early 1990s.

The energy landscape that currently characterizes CEE states is a far cry from the conditions found in the region only two decades ago. Generation, distribution and retail supply functions within formerly-integrated electricity and gas companies are now formally unbundled, with separate legal entities responsible for transmission activities. Each country possesses a nominally independent regulatory body in charge of operations such as licencing and price setting. However, this broad picture hides a much more intricate and complex regulatory architecture, in which the presence of energy market that would work along the lines of initial policy prescription is more often the exception than the rule. The role of the state in this largely understudied policy domain remains strong – even if the channels for the exercise of its power have been altered – as does the ability of material legacies to assert themselves over present and future reform paths.

Within the study region, the Czech Republic and Poland have undertaken the most extensive set of energy sector reforms relative to initial neoliberal prescriptions. Both countries have now fully transposed the provisions of the EU's 'third energy package' in their national legislation. While Hungary initially implemented reforms along a similar path, recent political engagement in the management of the electricity and gas sectors has resulted in the emergence of a more complex policy landscape. Macedonia was an initial frontrunner in the Western Balkan setting but has fallen behind in recent years. Many of our interviewees indicated that reform delays have further increased the risks that vulnerable groups face, by denying them the benefits of liberalized energy markets despite removing the universal support and subsidy mechanisms that characterized the centrally planned economy.

## ***Hungarian price cuts evaluated as socially regressive and harmful for energy efficiency***

Hungary's energy sector is currently functionally and legally unbundled, having undergone a series of liberalization, privatization and deconcentration measures in the 1990s and 2000s. But the country's gas and electricity markets have been increasingly dominated by the state since the election of the second Viktor Orbán government in 2010. The same government has announced plans to create a state-run, non-profit public utility holding company. This would initially distribute power, gas, and district heating services; water supply, sewage, and household solid waste collection would be covered at a later stage. Electricity and gas prices remain regulated for the majority of Hungarian households – a fact that became apparent in 2013, when the government mandated 20 per cent cuts in the prices of district heating, gas and electricity; further cuts ranging from 3 to 7 per cent were implemented in 2014. These measures have been accompanied by a series of levies on the assets and operations of energy companies. As a whole, they have resulted in financial losses for utility companies and the flight of foreign capital. Expert and decision-makers interviewed for the purposes of this study emphasized that the price cuts are primarily a political and electoral measure as they mostly benefit middle-class households, and do not encourage end-use energy conservation and efficiency.

### **Comprehensive residential energy efficiency policies are needed**

The post-communist transformation has led to a significant drop in the energy intensity of most economies in CEE. Direct improvements of the efficiency of energy demand have played a significant role in this context. These have involved investment in the upgrading of existing and construction of new energy production facilities and transmission infrastructures, well as residential retrofits to increase the thermal efficiency of the housing stock. Such measures of particular importance for the mitigation of energy poverty, which is primarily driven by the inability of households to purchase affordable warmth in the home. Our interviews in Poland, Hungary and the Czech Republic highlighted the importance of housing ownership structures in facilitating the implementation of residential energy efficiency retrofit programme. Overall, this process has been easier in countries with a longer tradition and higher prevalence of co-operative dwellings, and instances where the privatization process did not lead to a fragmentation of housing tenure.

Many of our interviewees highlighted that energy efficiency policies have principally been targeted towards housing in collective apartment buildings as opposed to individual homes. Rural and suburban areas, as well as inner-city districts in some contexts, have often remained outside the reach of state-supported programmes. Also, there is a need for 'deep retrofits' involving all aspects of the housing stock. Low-income households have often been left out of energy efficiency policies due to the lack of upstart finance.



**Figure 1.** The refurbishment of inner-city tenement apartment buildings has been patchy in many of the EVALUATE case study cities, and has been contingent on micro-scale tenure and governance patterns.

### **Spatial contexts matter**

In analysing the available evidence from the CEE context, we have identified several types of spatial imprints of energy vulnerability in the urban landscape. These are the combined outcome of housing and social structures. They include residential quarters affected by the reform of district heating, homes inhabited by older people living in inner-city areas, dwellings and neighbourhoods with a disproportionate presence of the Roma minority, as well as low-income households living in inefficient suburban housing. While this list is far from exhaustive, it emphasizes the need for considering social, spatial and political systems via a joint framework when determining where and how energy vulnerability arises and is concentrated.