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# Strategy proposal for mitigating greenhouse gas emissions through energy poverty alleviation in Cluj-Napoca and the Cluj-Napoca Metropolitan Area

This report is written as part of the project "Mitigating GHG Emissions through energy poverty alleviation  
in Romania" (EnPower) project

Implemented by Babeș-Bolyai University, in partnership with adelphi GMBH (Berlin) and Cluj-Napoca  
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This strategy proposal envisages the mitigation of GHG emissions through the alleviation of energy poverty at the level of the city. The proposals are based on various research streams at the European, national, and local level conducted by the researchers at the Babes-Bolyai University and international collaborators. Protecting vulnerable consumers and alleviating energy poverty has become an important aspect of the just energy transition in the European Union. Energy poverty represents a problem throughout all of Europe, with a multitude of factors contributing to the issue. The more recent policy approaches at the EU level have focused on providing vulnerable consumers with affordable, secure, inclusive and sustainable energy. However, the cobenefits these policies provide for achieving social and climate goals did not yet receive much attention and should become a strong argument for implementing long term sustainable energy poverty alleviation policies at all levels of governance.

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### **Specificities of Cluj-Napoca and the Cluj-Napoca Metropolitan Area**

Despite the widespread image of Cluj-Napoca as a city in a continuous development, with a booming academic, economic and cultural life, as a “magnet city” as labeled by the World Bank, with various labels, such as “innovative” or “smart”, attached to it, this survey illustrates several elements associated to social and economic inequalities, profoundly rooted in the patterns of the city’s development. This is not specific only to Cluj-Napoca, but to many rapidly developing urban communities across the post-communist space, but also in Western contexts.

Bearing in mind the typical variables associated with energy poverty - mainly low income, low energy efficiency of the residential building stock - a quick glance at the city points to the fact that Cluj-Napoca displays the proper context for energy poverty to occur. The city’s biggest residential



neighborhoods - Manastur, Gheorgheni, Marasti, Grigorescu, Zorilor - are built during communism, between the 1960s and 1980s, therefore most collective residential buildings bear certain common features which point to low efficiency: at least 30 years old, poor initial insulation, made of concrete or prefabricated panels. Thus, such buildings clearly need interventions for thermal rehabilitation, which have happened for part of them and to a larger extent than in other urban areas. Moreover, the initial outer ring of the city - Iris, Dambu Rotund, Someseni - comprises mainly individual houses similar to rural households. The last 20 years has witnessed a booming construction sector, with new residential buildings occurring in the older neighborhoods, but also newer neighbourhoods being built within the limits of the city - Buna Ziua, Sopor. Moreover, some of the villages just outside the city's limits - Floresti, Apahida, Baci - have also seen a significant amount of new residential development, transforming into virtually neighborhoods of the city, although they remain de facto separate localities and part of the Cluj-Napoca Metropolitan Area. This complex dynamic has favored a peculiarly expensive housing market, the most expensive in Romania, with prices located at 1800 euro per sq meter in an older collective building and 1900-2000 euro per sq meter in a new collective residential building (with some estimations going as high as 2400 euro per sq meter). In terms of material poverty, Cluj-Napoca is known among developing cities with extreme poverty enclaves at the outskirts, with the communities around Cantonului street and next to the Pata Rat landfill gathering more than 1500 people, mainly ethnic Roma. From a different perspective and also bearing the features of communist legacy, Cluj-Napoca is a city with a formerly exhaustive district heating system, but marked by a long flow of disconnections following 1990, similar to other cities in Romania, yet with less problems than in Bucharest and with significant more will from the local government to invest and to maintain it at a viable and competitive level.

### **Proposals relevant at a general level**

#### Data Collection and Analysis for Policy Needs Assessment and Targeting

The effective use of data on buildings, energy consumption, and income levels at the municipal level can be an invaluable asset in identifying and alleviating energy poverty and reducing GHG emission. Most municipalities have troves of unused data on the relevant indicators of energy poverty. Proper systematic use of this data can help municipalities better understand where interventions are necessary



and on which driver of energy poverty to focus these interventions. During the course of this project we had access to the municipal data on the renovations state of buildings, social assistance programme for income and heating and social housing, which was complemented by survey data from 826 randomly selected households. The survey data included data on income, energy consumption, and subjective perceptions of quality of life and comfort. This precise data meant that energy poor household could be identified. Unlike previously assumed clustering, energy poor households were very much dispersed throughout Cluj-Napoca. The data showed that energy poor households existed both in buildings with poor energy performance as well as ones with better performance, highlighting that income was still the most significant driver of energy poverty. While renovating the worst performing buildings is important for reducing energy costs for those households, as well as more generally in achieving climate targets, making proper use of data to accurately identify energy poor households allows more precise targeting of social assistance programmes, such as those for heating and cooling. This would especially benefit the households who are above the poverty line but who fall under it once they pay for their energy bills and are often excluded from various social assistance programmes.

#### Work with local stakeholders to access data and identify energy poverty

Building on the previous recommendation of data collection, local authorities should work with the relevant stakeholders to access the data which they do not normally have. A key stakeholder in this are the utility companies as they hold the data on energy consumption, late payments, disconnections, and informal access. A close collaboration with these key actors can help local governments identify indicators or energy poverty early on. Working with local civil society organisations can complement the quantitative data of the utility companies with qualitative insights from the organisations working on the ground with vulnerable households.

#### **Proposals specific for Cluj-Napoca and the Cluj-Napoca Metropolitan Area**

Three categories of recommendations can be formulated based on the scientific and policy report. They target the three main groups identified in the project proposal:

##### Households



- Information campaigns aiming at reducing indoor temperature at least at the level of the national standard of 21 degrees Celsius indicated in construction regulations. Arguments should be formulated around reduction of expenditure and an increase in available funds for other household priorities, as a half of those indicating an inside temperature higher than 21 degrees Celsius fall under or are very close to the poverty line. Alternative solutions for the improvement of indoor comfort should also be offered as a large part of the energy poor consumers prioritize indoor comfort.
- Raise awareness among households that cooperation with neighbours is important in order to access funding and pursue rehabilitation projects

#### Public administration

- Coordinate information campaigns on consumption reduction at the level of households in line with local sustainability policies, especially given the fact that most efforts to improve energy consumption and energy efficiency has been focused so far on public administration buildings and facilities, while the residential area is the most important consumer and polluter.
- Continue the efforts to rehabilitate residential buildings in Cluj-Napoca while better targeting the lowest-performing buildings and also including single-family buildings, which have so far not been included in any refurbishment programme.
- A more systematic approach in collecting information on socio-demographic data, the technical characteristics of the buildings and facilities, energy consumption and bills, household income and expenditure, indoor temperature, values and consumption habits should be considered in order to better target interventions and better programme aid. Based on the data collected in the project, energy poverty appears to be scattered throughout the city and easy to mistarget, while blanket measures are resource-intensive and may lead to improving the situations of those households who are already better off.



- The implementation of a one-stop-shop at the level of the public administration to deal with energy poverty in a proactive way should be considered given the need for a proactive and integrative approach in terms of functions that are already being performed at the level of the local public administration in various offices and departments but which are rarely matched to target energy poverty. This integration is needed at the level of the following departments
  
- A consolidation of the department dealing with tenant associations, which is currently only pursuing a reactive role without having any systematic communication with these beneficiaries. It would be desirable for this department to establish an official communication procedure with tenant associations comprising all of these actors and their members. As tenant associations are only confined to multifamily buildings, contacts with single-family households should be also established. The local public administration is already using a number of tools to communicate with citizens on various issues, such as the newsletters, social media, or the mass media, however, for matters covering urban matters a more direct communication is desirable. This can be a useful tool to launch various information campaigns including on energy efficiency and consumption behaviour, climate impact or support schemes and programmes.
  
- Consolidating at the level of the public administration an informal working group of key stakeholders on the local energy market. This working group should include utilities, the public administration including the energy manager, consumer representatives, NGOs, academic and research institutions, and work together to build trust, find solutions and initiate various programmes together. Trust-building at this level is important given the need for data, community awareness and involvement and solutions from all these actors. The objective of this group should be to generate commitment to implementing local priorities on sustainable energy consumption at the general level but also specifically in the residential sector . One of the tasks for this informal group should also be to commit to communicating data and finding solutions regarding energy poverty.
  
- Identification of other trust-building and cooperation mechanisms
  
- Finding solutions to halt the process through which households self-disconnect from the district heating to instal individual boilers - a trend that is contrary to climate objectives. The local authority



has expressed intentions to prohibit the installation of individual boilers in new residential buildings, however alternative resources are not yet offered at the level of urban development plans. Moreover, solutions need to be found for the boilers already in use.

### Utility companies

- Utility companies should regard energy poverty as a priority and a part of the european obligations on energy efficiency and liberal market play
- Utility companies should implement procedures and data analysis routines that would enable them to identify manifestations of energy poverty (excessively high or too low consumption related to household characteristics, adjournment of payments, lack of access, informal consumption) and initiate together with the local public administration and other relevant stakeholders (including within an informal group) a dialogue with the aim of finding suitable solutions.
- Better informed GDPR requirements and procedures are needed at the level of legal and management decision-making in private companies to guide them to analyze and share anonymized data on energy poverty especially when data is needed for scientific research and community welfare, which are considered to be special situations of GDPR, exempt of the usual requirements.