Energy poverty in Romania –drivers, effects and possible measures to reduce its effects and number of people affected

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Abstract. Nowadays, over 10% of the population of the European Union is facing energy poverty. Energy poverty is defined as the situation where a consumer cannot access energy services in his household up to a socially and materially necessitated level. Although Romania is characterized, according to official European statistics, by a high number of persons at risk of poverty or social exclusion – 40.3% in 2014 – as compared to the other Member States – 24.4% for EU27 – recent studies of the European Commission show that only 12.3% of Romanians were suffering in 2014 of energy poverty. Still energy poverty is considered by several national and international institutions a major problem in Romania, just like in the other “new” EU Member States. So we ask ourselves what is energy poverty and what are the drivers of energy poverty in Romania. Energy poverty has recently drawn the attention of both academic research and policy makers, fact that has led to an mainly uncoordinated excess of national and international studies regarding this topic. This article aims to restrain the concept of energy poverty from the perspective of national and EU policies and regulations by reviewing the existing knowledge and critical approaches in this field. Also the study aims to analyse Romania’s development linked to the development of national and EU policies, laws and regulations in order identify the appropriate measures to reduce energy poverty, with regard to its main drivers and effects. Further, the paper explores possible policies that could be implemented to reduce the number of people affected by energy poverty, tailored on the specifics of the Romanian energy sector and Romania’s overall economy. Based on the findings, recommendations are drawn. The research relies on the current body of literature as well as on data available at national and at international level in this field.

Keywords: energy poverty, energy efficiency, energy services, households, policy, Romania.

Introduction

At the end of 2016, the European Commission launched a new package of measures aiming to keep the European Union competitive as the clean energy transition is changing global energy markets, namely the “Winter Package”. “Providing a fair deal for consumers” is one of the three main goals of the Commission’s proposal next to putting energy efficiency first and achieving global leadership in renewable energies. These goals have strong implications in the policies addressing energy poverty. Not only are consumers supposed to have a better choice of supply, access to reliable energy price comparison tools and the possibility to produce and sell their own electricity, the package also contains a number of measures aimed at protecting the most vulnerable consumers (European Commission,

2016a). Independent of the Winter Package, “To reduce energy poverty and protect vulnerable customers” is also one of the 5 main goals of the Romanian Energy Strategy 2016-2030 with the perspective of 2050, document elaborated by the Romanian Ministry of Energy 2016 (Ministerul Energiei, 2016) and not yet adopted by the Romanian Parliament. Given that Romania is undergoing a deep process of restructuring its national energy sector, this is an appropriate moment to address possible measures to address the problem of energy poverty.

Agreeing with the definition of energy poverty as a condition wherein a household is unable to access energy services at the home up to a socially and materially necessitated level (Buzar, 2007), we’ve decided to look into national and international policies regarding this subject. We intend to analyse adopted policies, laws and regulations as well as planned ones, followed by critical approaches regarding these policies seeking to make recommendations to allow Romania better to respond to the drivers of energy poverty and to reduce their effect on the affected population. Here for we also intend to identify the main drivers of energy poverty in Romania.

Status quo

Energy poverty is a multidimensional concept that involves both an objective and a subjective dimension (Rademaekers et al, 2015). From an objective standpoint, energy poverty characterizes the households whose net income after deducting the cost of energy is below the national poverty line and energy costs are above the national average. From the subjective point of view, a household is in poverty if its members state that they cannot provide an adequate level of thermal comfort in the cold season. The results of the most recent EU-wide survey on income and living conditions (EU-SILC 2014) shows that 10.2% of the population is considered unable to maintain adequate heating (European Commission, 2016a).

A range of market and regulatory failures have led governments to intervene in a wide variety of ways over the years to steer the development of the energy sector. In order to achieve policy goals such as reducing pollution and greenhouse gas emissions, improving security of energy supply or reducing the cost burden of energy on poor households or vulnerable businesses, regulatory or financial measures have been introduced that affect energy producers and consumers as well. (European Commission, 2016b)

Energy poverty is a major challenge across the EU, and has its root in low incomes and energy inefficient housing. In 2014, the lowest-income households in the EU spent close to 9% of their total expenditure on energy. This is a 50% increase compared to 10 years before, much more than for an average household.

Not only are the climates of SEE countries characterised by cold winters, but they have also been disproportionately affected by the typical legacies of the communist era centrally planned economy – indirect energy price subsidies, reliance on polluting sources of energy, state interference and ownership of energy enterprises as well as inefficient housing stocks and heating systems – to a disproportionate extent within the European Union (Bouzarovski et al., 2012).

The gradual liberalization of the electricity and natural gas market in Romania is carried out in the context of an unsustainable energy sector, facing a series of difficulties, including high energy losses and extensive energy poverty. On a medium term, the process

of electricity and gas market liberalization leads to a considerable increase in electricity, natural gas and heat prices, a process that will put a high pressure on the capacity of all energy consumers to pay energy bills (Leca, 2015), despite the social measures in place.

Out of the nearly 7,500,000 homes in Romania 2015 (urban 4,300,000 rural 3,200,000) a good portion are heated only partially: about 90% in the rural area and almost 20% in cities. Especially for housing heating in the urban area, the inability of families living in dwellings to ensure the necessary level of thermal comfort is correlated with the low available incomes for paying the bills. The average net monthly income per capita in 2015 was ca. 225€ (urban 262€, rural 172€) while the energy costs made up for 15% of the average net household income (urban 14%, rural 18%) (INSSE).

Romania was 2015 sixth in the EU regarding the average price of electricity for households (Eurostat). However, given the relatively low purchasing power, price affordability is a major problem, leading to a high level of energy poverty. Additionally, according to Romania's former Minister of Energy, about 100,000 dwellings in Romania are not connected to the electricity grid.

Another aspect that cannot be neglected in the analysis of energy poverty in Romania, in addition to the coverage of heating costs in winter and the universal access to energy services is the high share of electricity costs in the energy consumption basket of households (urban 32%, rural 33%, poor households, first decile 48%).

The final price of energy in Romania is considerably below the European average, both for natural gas and electricity (Eurostat). 2015 Romania had the lowest price in the EU for natural gas for households of 34 €/MWh, followed by Estonia (38 €/MWh) and Bulgaria (39 €/MWh).

For electricity, Romania had 2015 the sixth lowest average price in the EU for households, 132€/MWh after Bulgaria (96€/MWh), Lithuania, the Czech Republic, Estonia and Croatia (131€/MWh).

The average purchasing power in Romania is on the other hand also well below the European average. Eurostat (2016) shows that the GDP per capita in Romania, at purchasing power parity, it is 57% of the EU average. At the same time, Romania has the greatest degree of inequality in income distribution across the EU, with a Gini coefficient of 37.4 in 2015, significantly above the EU average of 30.9.

These data suggest that Romania does not face a structural problem of high energy prices, as other European countries do, but rather a structural problem of energy poverty, given the large share of approximately 40% of the population in energy poverty, according to calculations based on the definition used by Law 196/2016 regarding minimum income inclusion. Also the social protection policy in place and the regulated energy prices were inefficient and of limited effect.

Proposed measures and solutions

Adopted National and International Laws and Regulations addressing energy poverty

Energy poverty was first thematised within EU institutions while preparing the Third Energy Package, when political action within the European Parliament led to the integration of energy poverty concerns within the Directives 2009/72/EC and 2009/73/EC. The directives recognised the existence of a growing energy poverty problem in Europe, requiring member states to individually define vulnerable customers and ensure the

necessary energy supply for them, so as to decreasing the number of people suffering from this situation.

The EU has adopted a proactive approach in dealing with the social impacts of energy liberalisation in former East-Block countries, as evidenced, in part, by the establishment of the Energy Community Treaty. (Bouzarovski, Petrova, Sarlamanov, 2012)

Within the general discourse of European public policy, the concept of energy poverty also relates to the concept of vulnerable consumer. The vulnerability of energy consumer is described related to its inability to access energy, for different reasons: difficulty in paying bills, risk of interruption and disconnection, lack of adequate information etc. (Pye et al., 2015). A vulnerable consumer is typically a person with low income, elderly and / or with a disability or illness.

Only a few EU member states have national legislation that includes the concept of energy poverty with no legal consensus on the definition of the term.

Romanian Law no. 123/2012 for electricity and natural gas

defines “vulnerable customer” as “a final customer belonging to a category of household customers who, for reasons of age, health or low income are at risk of social exclusion and to prevent this risk, benefit from social protection measures, including financial ones.”

Romanian Law no. 196/2016 on minimum income inclusion

establishes social protection measures and eligibility criteria. The law aims preventing and combating poverty and the risk of social exclusion. It operationalizes the concept of vulnerable consumer and defines it as a “domestic customer, single person or family that cannot ensure its own budget to fully cover costs of home heating and whose incomes are located within the limits prescribed by law”.

The law enters into force in 2018. A household will be entitled to receive a supplement for housing when its adjusted net income is beneath 133€/month, for now a similar aid mechanism is in place.

Another support mechanism in place in Romania is the social tariff for vulnerable consumers of electricity, valid for a small number of kWh consumed per month.

National and International Laws and Regulations addressing energy poverty - in public debate/not adopted yet

The Winter Package

of the European Commission recognizes energy poverty as “an important social issue: it has a significant negative impact on public health and is a factor deepening the social condition of poverty and social exclusion and has negative effects on the efforts to reduce GHG emissions, as energy consumption is usually inefficient in such households”. The Commission defines energy poverty as a situation of households that cannot be heated sufficient and / or cannot be covered with other basic energy services.

With the package “Clean Energy for All”, the European Commission proposes to establish an Energy Poverty Observatory which will monitor the level of energy poverty in each Member State and disseminate best practices for reducing this phenomenon. Member States will have to monitor and report on energy poverty.

The proposal focuses on the protection of vulnerable consumers, including by setting up a mechanism to avoid disruption of supply for consumers who are unable to pay their energy bills on time. Social regulated prices and tariffs will be allowed as a temporary

measure to protect vulnerable consumers. However, medium-term and long-term causes of energy poverty shall be tackled through energy efficiency measures set out in directives for energy efficiency, respectively Energy Efficiency of Buildings. Member States will be asked to take energy poverty into account, by requiring a share of energy efficiency measures to be implemented as a priority in households affected by energy poverty and in social housing.

Romania's Energy Strategy 2016-2030 with the perspective of 2050

aims to reduce the number of citizens living in energy poverty, by the improvement of social protection mechanisms and programs directed to increase energy efficiency. Also the Strategy aims to decrease the number of households without access to alternative sources of energy.

Existing selective protection mechanisms are supposed to be directed to those who really need social assistance and the assistance must be sufficient to ensure real protection of vulnerable consumers.

The Strategy addresses the need of medium and long term, cost-effective solutions to be applied for upgrading the heating systems in rural areas and increase the energy efficiency of housing. Also there is a need to identify funding sources for these programs, particularly for households affected by energy poverty.

In parallel, the strategy aims to increase the quality of communication between energy suppliers and consumers, through

- the continuation of the installation of smart meters with remote reading and
- the increase of transparency of the final energy price by continuing the recently adopted model for the electricity bill.
- free up to date information on offers
- the guaranteed right to change supplier at short notice and without undue costs.

Competitive and interconnected energy markets shall support the competitiveness of the economy as a whole by ensuring the best energy prices regionally. The benefits shall be felt directly by the final consumer, by obtaining lower prices in the medium and long term.

The urgency of the problem of energy poverty becomes clear when analysing the set of planned measures included in the Strategy. All measures addressing energy poverty are of short term with implementation time-lines until 2020.

Contemporary literature published in the main scientific information streams addressing energy poverty in the European Union and Romania

Some authors argue that social support measures remain largely 'residual' and often serve as political instruments, supporting this assessment by the widespread tolerance of nonpayment and arrears in former communist EU Member States (Bouzarovski, Petrova, Sarlamanov, 2012). In a consequent study applied on the Hungarian energy sector, Bouzarovski argues that households may purposely choose to delay the payment of expensive energy bills in order not to run out of money in the winter months, thus transferring the financial consequences of energy poverty to the utility providers (Bouzarovski et al., 2015).

Romanian authors (Leca, 2015; Serban, 2015) underline the necessity to include the promotion of centralized heating systems, since they have a higher energy efficiency in

consumption, in national strategies. Leca proposes the consideration of a VAT reduction for the centralised district heating system in Romania, according to the model of other EU Member States. Serban (2015) argues that decentralised systems offer the possibility of heterogeneity in home heating and hereby achieving relative cost savings (derived from the option to ensure optimum temperatures only in one room) at the cost of low energy efficiency and energy wastage. This choice is an indicator of thinking in terms of presumptive risk of energy poverty.

She also argues that Romanian legislation in place discriminates between different categories of vulnerable consumers, favouring urban consumers (the law provides in some cases full compensation of heating cost), while the vast majority of rural households depend on the purchase of wood from a wide distance (less than half of the costs are covered).

These findings underline the lack of coordination and equity in support mechanisms in place. Zamfir et al. concluded in their study on energy poverty in Romania that the main problem of social policy in the energy sector is the lack of global vision. There are many measures, but sectoral/punctual, depriving their assembly into an integrating vision. They argue that although we are witnessing a spectacular growth in institutional European and national indicators, a development of a correct definition of energy poverty in all its complexity, and appropriate assessment instruments alongside are crucial in developing social policies for energy (Zamfir et al., 2015).

A complex, unique approach on national and EU-level may be more constructive in addressing energy poverty. Dubois and Maier however, conclude in their study (Dubois, Maier, 2016) that it would be difficult to have a unique approach for all European countries arguing that while in certain countries, there is mainly a problem of energy services deprivation for a large share of the population, in other countries it is predominantly a problem of certain groups of households. They also underline that income support measures generally do not address the causes of energy poverty, but some of its symptoms by allowing households to pay for their energy bills. However, they reverse their recommendations when considering the larger problematic of stagnating incomes and rising energy costs all over the EU, concluding that there are reasons to support an EU wide approach. The EU's energy transition will be acceptable and politically feasible only if it is just and does not disproportionately worsen the situation of the most vulnerable households.

Quo vadis? Conclusions and recommendations

On a subjective level, energy poverty is driven by the expectations and perceptions of end customers, which are omitted by most studies we have encountered in our research. For Romanians for instance it is common to heat their apartments up to 25-26°C in the cold season (less common in WE households) and to cool them to 20-21°C in the warm season. So the perception of energy poverty is strongly connected to their expectations regarding an adequate level of thermal comfort. In order to change this habits and their level of expectations, educational measures (regarding the optimum temperature for surroundings) have to be undertaken and time has to pass, in order for Romanians to forget about the cold endured during communistic times.

On an objective level however, energy poverty is wide spread in Romania and has several drivers: rising energy prices, rising share energy costs in the incomes, low incomes,

low purchasing power, inequality in income distribution, historic legacy, energy inefficient housing stocks, unsustainable energy sector, facing a series of difficulties, including high energy losses and not to mention market and regulatory failures.

Recent regulatory or financial measures introduced to achieve policy goals such as energy market liberalisation, reducing pollution and greenhouse gas emissions, improving security of energy supply or reducing the cost burden of energy on poor households or vulnerable businesses have affected energy producers as well as customers. Delays in payment of the energy poor on the other hand, transfer of poverty to utility providers, weakening the energy sector and also the mix of public and private ownership in the sector, pushing it towards publicly controlled energy providers.

The preservation and development of centralised heating systems could play an important part in the amelioration of energy poverty in urban areas. Developing programs and mechanisms encouraging energy efficiency in houses and individual heating systems is crucial in order to address rural energy poverty.

The transition to competitive markets cannot be reached without public support. Or, given that the phenomenon of energy poverty is accentuated in Romania, the success of energy policies depends, on one hand, on the extent to which the Romanian state will ensure the affordability of the transition through effective mechanisms of social protection and energy efficiency. On the other hand, their success presupposes the realization of the benefits of the competitive market, so operators have competitive energy prices or, where appropriate, to provide them with economic incentives for international competitiveness.

Policy makers have to pay attention when taking explicit measures reflected in prices, not to blunt price signals that would otherwise steer energy consumption and production, energy efficiency and investment.

Also social protection measures and economic incentives tend to be used as political instruments, caution is needed when developing and implementing these and also careful planning including the development of economic models with medium and long term projections of measures is mandatory.

In order to assure the predictability of the legal and regulatory framework, often changes in regulation and overregulation have to be avoided.

The question of governance and coordination has to be further addressed. For now, energy poverty in Romania is mainly governed by the Ministry of Energy, the Ministry of Labour & Welfare, and Ministry of Regional Development.

Considering the implications of the integration process of energy markets on EU level on the consumers, as well as EU's ambitions regarding cohesion, we consider that there is a need of a clear, comprehensive directive on EU level regarding energy poverty.

From a technical point of view, new, market-ready technologies should be further fostered. The 100.000 Romanian households without access to energy services could be addressed by small scale distributed generation systems. Also cost-effective insulation materials and heating solutions should be promoted and subsidised in rural areas. With regard to the power grid, the smart metering program should be further developed. Doubled by appropriate consumer education within school programs and communication campaigns, offering consumers comprehensive information regarding consumption, supply options and energy costs, the proposed measures will lead in the long term to eradication of energy poverty.

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