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ENERGY SECURITY FOR WELL-BEING IN EVERYDAY LIFE: THE CASE OF ROMANIA

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Abstract. The research offers a current perspective on the Romanian experience framework on the road of green transition as a solution to the phenomenon of energy poverty, starting from Romania's commitment to achieving the goals of the *Paris Agreement* and the *2030 Agenda*. The paper underlines the contribution of Romania on the path to consolidating the Energy Union, along with internal efforts for balancing the macroeconomic and social aspects. To monitor the progress, the primary energy consumption is an essential indicator. The accessibility of the price becomes a strategic responsibility for preserving well-being in everyday life.

Key words: energy poverty, vulnerable consumers, energy union, social balance

Introduction

Energy-policy focus is better defined in EU Member states fighting the highest energy poverty, although the social policy is often too expensive to be implemented (Primc, Slabe-Erker, 2020)[25] and EU directives are still considered ambiguous (Kyprianou et al.,2019)[26]. The energy poverty affects the level of social security – a public good seen as a satisfactory level of protecting basic living conditions and standards (Świerszcz, 2017)[27]. Statistics in Europe show that the energy poor population

[25]Primc, Kaja, and Renata Slabe-Erker. "Social policy or energy policy? Time to reconsider energy poverty policies." *Energy for Sustainable Development* 55 (2020): 32-36

[26]Kyprianou, I., Serghides, D. K., Varo, A., Gouveia, J. P., Kopeva, D., & Murauskaite, L. (2019). Energy poverty policies and measures in 5 EU countries: A comparative study. *Energy and Buildings*, *196*, 46-60

[27]Świerszcz, Katarzyna. "The impact of energy poverty on the level of social security." *Proceedings of the 4th International Conference on Management Science and Management Innovation (MSMI)*. 2017

generally also report bad self-reported health status and poor emotional well-being (Thomson et al., 2017)[28].

(Recalde et al., 2019)[29] explored the association between energy poverty vulnerability, energy poverty prevalence and excess winter mortality, the most vulnerable countries being in eastern and southern Europe. On the other hand, countries with better living standards reduce the detrimental effects of energy poverty on public health (Pan et al., 2021)[30]. Speaking of well-being levels, large disparities occur between energy poor and non-energy poor households within relatively equal societies across Europe (Thomson et al.,2017)[31].

Implementation issues for energy security as a factor of well-being in Romania

The European Pillar of Social Rights[32] (EPR, 2017) states energy as a right for people, among the essential services accessible to all. As a culturally sensitive and private condition, measuring energy poverty is challenging especially because it is temporally and spatially dynamic (Thomson et al.,2017)[33]. At individual level, energy poverty is driven by the expectations of end customers and requires educational measures. As an example, Romanians use to heat their houses up to 25-26°C during winter and to cool them to 20-21°C during summer (Clodnitchi et al.,2017)[34].

The survey *European's attitude on EU energy policy – 2019*[35]focused on a variety of questions on climate and energy policies and their wishes for future European action. For Romanians, energy EU policy means more competitive prices for consumers (35%), decreasing energy consumption across UE (32%) and shifting from fossil fuels to renewable energy sources to combat climate change (30%). As for energy priorities, respondents say EU must ensure access to affordable energy, for people to be able to pay their bills (41%) and to increase cooperation between Member States to give all

[28]Thomson, Harriet, Carolyn Snell, and Stefan Bouzarovski. "Health, well-being and energy poverty in Europe: A comparative study of 32 European countries." *International Journal of Environmental Research and Public Health* 14.6 (2017): 584

[29]Recalde, M., Peralta, A., Oliveras, L., Tirado-Herrero, S., Borrell, C., Palència, L., ... & Marí-Dell'Olmo, M. (2019). Structural energy poverty vulnerability and excess winter mortality in the European Union: Exploring the association between structural determinants and health. *Energy Policy*, *133*, 110869

[30]Pan, Lei, Ashenafi Biru, and Sandra Lettu. "Energy poverty and public health: Global evidence." *Energy Economics* 101 (2021): 105423

[31]Thomson, Harriet, Carolyn Snell, and Stefan Bouzarovski, ibidem

[32]The European Pillar of Social Rights (EPSR) https://www.epr.eu/what-we-do/policy-analysis/european-pillar-of-social-rights/

[33]Thomson, Harriet, Stefan Bouzarovski, and Carolyn Snell. "Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data." *Indoor and Built Environment* 26.7 (2017): 879-901

[34]Clodnitchi, Roxana; Busu, Cristian, Energy poverty in Romania–drivers, effects and possible measures to reduce its effects and number of people affected. In: *Proceedings of the International Conference on Business Excellence*. 2017. p. 138-145

[35] Eurobarometer, Europeans Attitudes on EU Energy Policy, https://europa.eu/eurobarometer/surveys/detail/2238

Europeans access to secure, financially affordable, and clean energy (40%). Access to secure energy means a well-connected energy network across the EU (41%) and to have more cooperation in cybersecurity in the field of energy between Member States (39%). Most respondents agree that it is the EU responsibility to encourage more investments in renewable energy, e.g., wind, solar (47%) and in research and innovation (45%), also to address energy poverty and a fair transition so that no one is left behind. Over the next 10 years, Romanians believe that EU should ensure energy costs as low as possible (36%) and should invest in and develop clean energy technologies (29%). 74% say that the EU energy label has influenced their choice of achieving electric appliances.

To monitor the fulfillment of the 5 pillars of the energy union (energy security, energy efficiency, decarbonization, competitiveness and innovation, the internal energy market)(COM/2015/080 final)[36], the EU has established the obligation for each of the member states to submit, by 31 December 2018, an Integrated National Plan for Energy and Climate Change (PNIESC) for the period 2021-2030 (Regulation (EU) 2018/1999)[37]. Romania has already taken important steps in this direction by developing the *Integrated National Plan for Energy and Climate Change 2021–2030 (PNIESC)*, which is the basis of *Romania's Energy Strategy 2020-2030, with a view to 2050*.

The relevant indicators in Romanian (PNIESC, 2020)[38]and for which there are sufficient data are the percentage of arrears on utility bills and the impossibility of heating the household to a satisfactory level.

Romania is in the lower third of the value of the price of electricity for household consumers in the EU (Eurostat, 2019)[39], but the relatively low purchasing power leads to a high level of energy poverty. Thus, in 2018, 14.4% of households in Romania had arrears of utility bills, compared to the average of 6.6% in the European Union in the same year (Eurostat, 2020)[40]. However, compared to 2011-2012, in 2018 this indicator improved by 15.3% (PNIESC, 2020). As for the indicator regarding the impossibility of heating the household to a satisfactory level, in 2020, 10% of households in Romania was in this situation, in comparison to the average of 8.2% (estimated) in the European Union (Eurostat, 2021)[41]. Compared to 2010 (PNIESC, 2020), in 2020 this indicator improved by 10.1%.

Market coupling, as a model for the energy transition, ensures that least-cost electricity can be dispatched in the EU for the benefit of end-consumers. Romania,

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[36]Energy Union Strategy,https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2015:80:FIN

[37] Regulation (EU) 2018/1999 of the European Parliament and of the Council of 11 December 2018 on the governance of an energy union and climate action, https://eur-lex.europa.eu/legal-content/RO/TXT/PDF/?uri=CELEX:32018R1999&from=EN

[38] Romanian PNIESC https://ec.europa.eu/energy/sites/ener/files/documents/ro_final_necp_main_en.pdf

[39] Eurostat, Arrears on utility billshttps://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mdes07&lang=en

[40]Eurostat -Arrears on utility billshttps://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20200120-1

[41] Eurostat, Inability to keep home adequately warm - EU-SILC survey https://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_mdes01&lang=en

Poland, Slovakia, Czechia and Hungary were included in the EU trading platform for electricity on June 2021 and the next step for Romania is market coupling with Bulgaria (Report COM, 2021)[42].

Energy efficiency measures for vulnerable consumers are expected to have a positive impact on electricity or heat costs as they are aimed to reducing final consumption. Policies and measures for the next years in Romania target the regulation of the vulnerable consumer, as well as finance measures. The implementation of the national action plan on energy poverty also sets out critical situations and customers who cannot be disconnected in such situations, as well as how operators recover costs.

Previously, the *National Strategy for Social Inclusion and Poverty Reduction for 2015-2020* (Ministry of Labor, 2015)[43] directly aimed to increase social inclusion in several key areas, including energy poverty. In 2019, the National Energy Regulatory Authority of Romania issued the *Regulation for the supply of energy to final consumers*[44]. Obligations are set for electricity suppliers in relation to such persons - priority in the supply of electricity, limitation of planned interruptions, and disconnection from the electricity grid is prohibited, including in situations of power crisis. It is also estimated that there will be a measure for vulnerable low-income consumers to stagger the payment of their electricity bill.

According to domestic law, Romania has been granting aid for home heating since 2011[45], for which the development of the national IT system of social assistance is required. The *Electricity and natural gas law*[46] creates, since 2012, the premises for the establishment of a solidarity fund in Romania for the financial support of the vulnerable consumer.

Another important element provided by PNIESC for achieving energy poverty goals in Romania is to ensure a fair transition, from the perspective of social and economic impact, for regions with a mono-industrial profile; for example, the Jiu Valley, area that depends on the coal industry, is included in the platform of the European Commission for Carboniferous Regions in Transition (European Commission, 2020)[47].

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[42] Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *State of the Energy Union 2021 – Contributing to the European Green Deal and the Union's recovery,* Brussels, 26.10.2021 COM(2021) 950 final https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0950&qid=1635350122158

[43]National Strategy for Social Inclusion and Poverty Reduction for 2015-2020http://www.mmuncii.ro/j33/images/Documente/Familie/2016/StrategyVol1EN_web.pdf

[44]National Energy Regulatory Authority, Regulation of 20 december 2019 for the supply of electricity to final customers,https://legislatie.just.ro/Public/DetaliiDocumentAfis/244638

[45]Romanian Government, Emergency Ordinance no. 70 of 31 August 2011 on social protection measures during the cold season,https://legislatie.just.ro/Public/DetaliiDocumentAfis/232413 and Law no. 196 of 31 October 2016 on minimum inclusion income https://legislatie.just.ro/Public/DetaliiDocumentAfis/183328

[46]Law no.123 of 10 July 2012 electricity and natural gashttps://legislatie.just.ro/Public/DetaliiDocument/139677

[47]https://ec.europa.eu/energy/sites/ener/files/documents/jiu_valley_regional_profile_-_start_technical_assistance.pdf

Romania's Energy strategy 2020-2030, with a view to 2050[48] sets price accessibility as a strategic responsibility and one of the main challenges of the energy system. At the same time, the strategy affirms that the focus on energy efficiency must have as a top priority the protection of vulnerable consumers. In Romania, total energy subsidies in 2019 was 1.4 billion euros, app. 0.7% of GDP, comparing to the average 1.3% of GDP in EU the same year (COM/2021/950 final)[49].

Renewables and energy efficiency are expected to create future job also in Romania. For example, in 2017, renewable energy employment reached 100 300 jobs in South-East's EU member states (Bulgaria, Croatia, Romania and Slovenia), the most important percentage was in the bioenergy sector (82%) (IRENA, 2019)[50].

Conclusions

The energy sector has a special importance in Romanians' everyday life. The challenge is to adapt the energy sector to the new development trends, taking into account, at the same time, the well-being needs of the citizens. Although Romania has made progress in combating energy poverty in the last 10 years, it is still necessary to close the gap with the EU average. The accessibility of the energy price is a crucial factor for preserving well-being in most people lives. Policies and measures for the next years in Romania target the regulation of the vulnerable consumer, as well as finance measures.

[48]Romania's Energy strategy 2020-2030, with a view to 2050http://energie.gov.ro/transparenta-decizionala/strategia-energetica-a-romaniei-2019-2030-cu-perspectiva-anului-2050/

[49]Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions State of the Energy Union 2021 – Contributing to the European Green Deal and the Union's recovery (pursuant to Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action), COM/2021/950 final https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021DC0950&qid=1635350122158

[50]International Renewable Energy Agency (IRENA), Renewable Energy Market Analysis: GCC 2019,https://www.irena.org/publications/2019/jan/renewable-energy-market-analysis-gcc-2019