

BEHAVIOURAL CHANGES TO ALLEVIATE ENERGY POVERTY IN EUROPE

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1. INTRODUCTION

Energy Poverty is one of the main social, technical and legislative issues of the present time in Europe, with an estimated number of affected people ranging from 50 to 125 million ([1]). The European Commission (EC) has put a lot of effort to solve this issue, as shown, for example, by the recent launch of the EU Energy Poverty Observatory in January 2018 ([2]). One of the points stressed by the EC is the importance to learn from the experiences and best practices carried out in the different Member States (MS). With this in mind, ASSIST 2GETHER project (funded by EU Commission under Grant Agreement n. 754051), of which RSE is a partner, aims to find some best practices and recommendations to address Energy Poverty from the implementation of a series of pilot actions with a group of advisors (called HEAs – Home Energy Advisors); such advisors are specifically trained to implement the pilot actions by educating energy vulnerable consumers (VCs) to optimize (and, possibly, reduce) their energy consumption, mostly through behavioural changes. In the project, RSE is responsible of the technical training of HEAs and the pilot actions planning. This paper collects the first results of the above mentioned tasks.

2. ENERGY POVERTY MARKET SEGMENTATION

The first part of the paper summarizes the results of a statistical analysis performed to understand how to define an “energy poor” or “energy vulnerable” consumer, as a common European definition does not exist. The main obstacle in performing this analysis is that the data often used for standard indicators (e.g. Low-Income High-Costs) are not available in many countries, so new ways to understand what is an “energy vulnerable consumer” have to be explored. Moreover, the availability of different data in the EU countries leads to a fragmented and often “not compatible” segmentation in different Member States. To overcome this barrier, it is necessary to define the background in which the pilot actions shall be inserted (the situation in the analysed MS) and to perform an on-purpose segmentation, by analysing and elaborating existing statistics databases (e.g. [3] and [4]) to which apply similar indicators (found in [5] and [6]), compatible with the available information.

3. TRAINING OF HOME ENERGY ADVISORS

The second part of the paper briefly introduces the training that will be proposed to the HEAs, in order

to show which competences are required to an HEA who wants to approach a vulnerable consumer/family and how to build them.

4. PLANNING AND EXECUTION OF THE PILOT ACTIONS

The third part represents the core of the paper, focusing on the planning of the pilot actions. This process has involved several stakeholders, through the organization of three workshops with local experts and stakeholders, massive literature reviews (e.g. by using [7] and [8]), a brainstorming with several project partners and consultancy with organizations that have already put in place vulnerable consumers actions or are actively working in the social field.. The proposed actions are assessed by analysing their pros and cons, constraints and the time and cost forecast for each of them. Finally, the outcomes of the first implemented actions are presented to give an insight of the preliminary results.

4. CONCLUSIONS AND RESULTS

The main conclusions that can be drawn are focused on the role of the Home Energy Advisor and on the energy consumption optimization that can be triggered by their advice to vulnerable consumers.

The first issue is related to the barriers that have to be overcome by the HEAs: in particular, the education background barrier, that has shown to be a pre-requisite for the success of the training, and the “trust” barrier towards energy vulnerable consumers, that needs to be clearly established by showing that HEAs act as a “third party” with no economic interest, e.g. a national consumer association or a local charity. This is also related to the last barrier, that concerns the possibility to use the “HEA qualification” on the job market.

The second issue is that, in many cases, it is almost impossible to reduce energy consumption of the energy vulnerable households. In fact, unaware of the energy-related benefits, they are already behaving in an “energy saving” mode and consuming as little energy as possible, in order to reduce their expenses. Therefore, the HEAs should only aim to optimize VCs energy consumption in order to reduce or maintain their current level of expenses, while consuming the same amount of energy (or more, thus increasing their comfort). This can be done by using energy in a “smarter” way, for example, by exploiting the different electricity price at different time of the day or by switching to a more convenient energy provider, with the help of the external experts, such as the HEAs.

REFERENCES

- [1] B. Atanasiu, E. Kontonasiou and F. Mariottin, *Alleviating fuel poverty in the EU – Investing in home renovation, a sustainable and inclusive solution*, Buildings Performance Institute Europe, 2014
- [2] EU Energy Poverty Observatory, *Homepage*, EPOV, 2018: <https://www.energypoverty.eu/> (last accessed: February, 15th, 2018)
- [3] ISTAT, *Spese per consumi delle famiglie: anno 2016*, Istat, 2016 [Micro-Data for Research use provided to RSE Spa by ISTAT]: <https://www.istat.it/it/archivio/202093> (last accessed: December 5th, 2017)
- [4] Eurostat statistics explained, *People at risk of poverty or social exclusion*, Eurostat, 2017: http://ec.europa.eu/eurostat/statistics-explained/index.php/People_at_risk_of_poverty_or_social_exclusion (last accessed: December 2nd, 2017)
- [5] C. Waddams Price, K. Brazier, W. Wang, “Objective and subjective measures of fuel poverty”, *Energy Policy*, Vol. 49, pp. 33-39, (2012)
- [6] Vv.Aa., *Selecting indicators to measure energy poverty: final report*, Trinomics, 2016
- [7] A. Z. Bajomi and A. Gosztonyi, *Good practices aiming to end energy poverty*, The Greens at the European Parliament and European Anti Poverty Network, 2016
- [8] Vv.Aa., *La lutte contre la precarite energetique en France - Journal Resolis #17*, RESOLIS, 2017