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Education strategies and behavioral actions to mitigate Energy Poverty

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ABSTRACT

In the recent years, Energy Poverty (EP) has become a big challenge in the European Union (EU), affecting 50 to 125 million of EU citizens. The EU is working to implement effective actions to tackle it. Home retrofitting is the most impacting solution, but it requires a large amount of money; on the other hand, energy-related behaviour change represents a first step for vulnerable consumers to reduce energy consumption and energy bills. With this aim, ASSIST 2gether project (H2020, Grant Agreement 754051) has created the “Home Energy Advisor” (HEA), trained with an innovative course, about energy, social system and communication skills. The goal of the HEAs is to implement pilot actions to mitigate EP by educating vulnerable consumers and increasing their consumption awareness, through behaviour change. In this paper, the planning and first results of HEAs training are described and analysed, together with the possible impacts on energy poor consumers.

Key Words: Energy Poverty, Energy Efficiency, Training Course

1. INTRODUCTION

Energy poverty is becoming increasingly important in the EU Commission agenda, mostly due to the high number of EU citizens affected by it (BPIE, 2014). While each Member State (MS) is free to adapt its local regulation to the country specific situation, the EC is putting a great effort in setting standardized guidelines through different directives and regulations, especially in the recent update of the Directives regarding Energy Efficiency and Electricity (Clean Energy Package, 2016).

However, large differences remain in the way in which Energy Poverty is defined and measured at EU and national level and in the actions to tackle it.

ASSIST project tries to answer these questions by going deep into energy poverty in different ways:

- by performing an analysis of the current definitions and indicators to measure energy poverty and how to intertwine them in order to reach a standardized definition and a common action target;
- by designing a dedicated training course that allows a new figure of advisor, called Home Energy Advisor (HEA), to acquire the required competences to successfully providing support at vulnerable consumers;
- in parallel to the above mentioned activities, by identifying which are the most effective soft (behavioural and low-cost) actions that can be put in place by the HEAs at national and EU level.

Thus, after a literature review on EP regulation and definition in all EU MS and an investigation on the most effective actions that have been put in place in the 6 project partners countries (Belgium, Finland, Italy, Poland, Spain and the UK), ASSIST project partners have designed a general training course for HEAs, that has been then adapted to the local context of each involved MS. The trained HEAs will then implement on-purpose defined pilot actions to support vulnerable consumers. This paper will go in deep in the analysis of HEAs training and in the action planning, presenting their first outcomes.

2. HOME ENERGY ADVISORS TRAINING COURSE DESIGN AND FIRST RESULTS

Energy poor consumers usually face several issues in accessing information on how to improve their conditions and/or to have access to subsidies and financial measures: this leads them to the need to relate to several different operators, each working in a specific field, but often with no competence to tackle this particular type of poverty. To improve such a situation, ASSIST project has planned to create a new figure, called the Home Energy Advisor (HEA), which should act as a “energy poverty single contact point” in order to provide assistance in different fields to energy poor consumers.

2.1. Training course structure

The primary task of the HEAs is to analyse energy needs and energy consumption behaviours of the involved consumers and to advise them on how to improve their consumption and/or reduce their costs, by increasing their energy consumption awareness. This can be done in different ways: first of all, by modifying their behaviour, then by changing their energy provision contract and/or by requesting financial support, and finally by using low-cost energy saving devices and measures. The final goal is, anyway, to increase vulnerable consumers awareness on how they can improve their economic condition, without reducing their comfort.

HEAs are not “autonomous” professional profiles but they have a supporting role within consumers care, social services and other working contexts; their role can be played by some already existing professional profiles (social assistants, civil servants, consumer association advisors, utilities employees, charity volunteers, etc...). HEAs are not technicians or energy professional figures (they do not need technical competencies to suggest deep and costly renovation), but are expected to have soft and integrated competencies. In order to build such competencies, it has been necessary to define a specific training course, whose basic structure, common to all involved MS, is:

- Analysis of energy consumption behaviour;
- Consumption check-up and energy support;
- Communication and consumers advice.

These macro-areas are then declined in different ways in the partners countries, in order to customize them to the available types of HEAs and the specific context in which they will operate. The Italian training course for national HEAs (called “TED – Tutor per l’Energia Domestica”) is structured as shown in Table 2.1. The course foresees a blended teaching mode, in which some modules are provided online, while some of them can be attended either online or in-person. The online course has been completely built by partners, in all the needed EU languages, on Moodle platform.

[Table 2.1] Italian training course for Home Energy Advisors

Area	Modules		Time [hours]	Methodologies
M1	ASSIST2gether HEAs Introductory Module		2-4	Blended
Energy behaviour analysis	M2	Basic Knowledge on Energy Sector	6-12	Online
	M3	Basic Knowledge on Social System and Vulnerability	6-12	Online
M4	Security and privacy elements		2-4	Online
Energy check-up and support	M5	Energy Behaviour check-up	2-4	Online
	M6	Energy Consumption Support	1-3	Online
	M7	ASSIST2gether Actions	1-3	Blended
Energy check-up & support	M8	Communicating Energy	4-6	Online
	M9	Relational Competences	6-8	Online
	M10	Planning and realizing communication initiatives and resources	2-4	Online

2.2. First results in Italy

The timing of courses and the methodology in each partner country has been defined based on the local needs; thus, the results cannot easily be compared among them. In this paragraph, only the results for Italy are reported. In Italy, the first edition of the course, fully online, has been completed by the candidate HEAs between September and December 2018. A second online edition started in January and, at the moment of writing (end of February 2019), some participants have already finished the course. Most of the involved HEAs were stakeholders involved during different dissemination events, while some of them have enrolled after reading about the project on different magazines or on the website and social media. In parallel, for some organizations that enrolled groups of volunteers or workers in the same geographic area, dedicated training (both online and in-person) has started at the beginning of 2019. Moreover, the involvement of students from high schools (“School-work alternance projects”) has foreseen the creation of dedicated short courses that fit in their working and studying duties. The main results are reported in Table 2.2.

[Table 2.2] Italian training course first results

Edition/time	Number of HEAs	Sectors
First ASL (School-work Alternance) edition - June 2018	6	High school students
First edition (full training) – September/ December 2018	57	Unemployed, third sectors operators, civil servants, social assistants, consumers associations, university students, researchers, energy & home companies
Second edition (full training) – January/ March 2019	15	Unemployed, third sectors operators, civil servants, social assistants, consumers associations, university students, researchers, energy & home companies
Second ASL edition – January/June 2019	1230	High school students
Consumers associations dedicated course – February/March 2019	13	Consumers associations volunteers
North West Italian charities dedicated course	110	Charities volunteers (providing shelter, food and clothes to poor people)

The HEAs trained in the first course have already started implementing the pilot actions, that are described in the next paragraphs.

3. PILOT ACTION PLANNING AND MONITORING OF THE RESULTS

In order to support vulnerable consumers, three types of activities have been planned:

- engagement activities, that have the aim to involve vulnerable consumers and get them close to the HEAs, for a further support; these activities are called, in the project, “Energy Cafés” and are foreseen as large events, open to all consumers, where generic information on energy saving is provided and vulnerable consumers are addressed in a general way;
- pilot actions, that have the aim to provide vulnerable consumers with one-to-one dedicated advice on how to optimize energy consumption and reduce energy bills; they are called, in the project, “dedicated advice”;
- mixed activities, called “synergies” (with other projects), that can be either energy cafés or dedicated advice, and are put in place in parallel with other projects (e.g. energy education for vulnerable consumers in recently renovated social housing stocks).

A deep analysis of the pros and cons of the foreseen activities has been performed by the partners, through literature reviews; moreover, they have been presented to many stakeholders, either during dissemination events or private events, in order to assess their feasibility. What is reported here is the final selection of activities.

3.1. Activities planning in Italy

In all the involved countries, the above mentioned activities are declined in different ways. For example, in Spain no “Energy cafés” are foreseen, but home visits will be performed by homecare personnel and social assistants and energy companies will organize in-person helpdesks for vulnerable consumers.

In Italy, however, there are more categories of HEAs than in Spain, so several activities have been planned, with the support of the already trained HEAs:

- a) Energy cafés:
 - a. Energy cafés at high school premises: the students that have already completed the short course are organizing an event at their high school (in a rural area), in order to increase families awareness on energy;
 - b. Energy cafés at charities premises;
 - c. Retail shops customers advice on home appliances, performed by students in the “Alternanza Scuola Lavoro” program.
- b) Dedicated consultancy (pilot action) will be mostly organized either as home visit or physical/telephone help-desk. The advice that HEAs can possibly give during the consultancy are:
 - a. Customized advice on energy consumption behaviour: it will be performed by all HEAs, examining consumers habits and energy bills (through questionnaires or direct measurements) and providing customized advice on how to reduce their energy consumption through behavioural actions.
 - b. Customized advice on available financial measures: it can be performed by different types of HEAs, such as consumers associations and energy companies help-desk personnel, public bodies personnel, etc....
 - c. Customized advice on how to read energy bills and choose a suitable tariff: it can be performed by different types of HEAs, such as consumers associations and energy companies helpdesk personnel, public bodies personnel, etc....
 - d. Customized advice on energy efficiency measures to implement in the house: it will be given only by those HEAs that will perform home visits (e.g. social workers, homecare professionals).
- c) Synergies – some examples:
 - a. Combination of energy cafés and dedicated consultancy with energy bills payment support in social housing;
 - b. Combination of dedicated consultancy, home retrofitting and energy consumption detailed monitoring in social housing.

3.2. Monitoring of the results

Monitoring of the results is done through the collection of data from the HEAs in the Moodle platform: HEAs will periodically report on the type of activities they have performed, the number of involved consumers and the

obtained results. Only for the activities categorized under “dedicated consultancy”, the HEAs will collect a baseline questionnaire, in which socio-demographic, building, consumption and comfort data are requested to each involved household. After providing the household with advice, the HEAs will verify their progresses with a second questionnaire (performed at least 6 months after the first), requesting the same data. At the end, this will be used to verify the project results, in terms of:

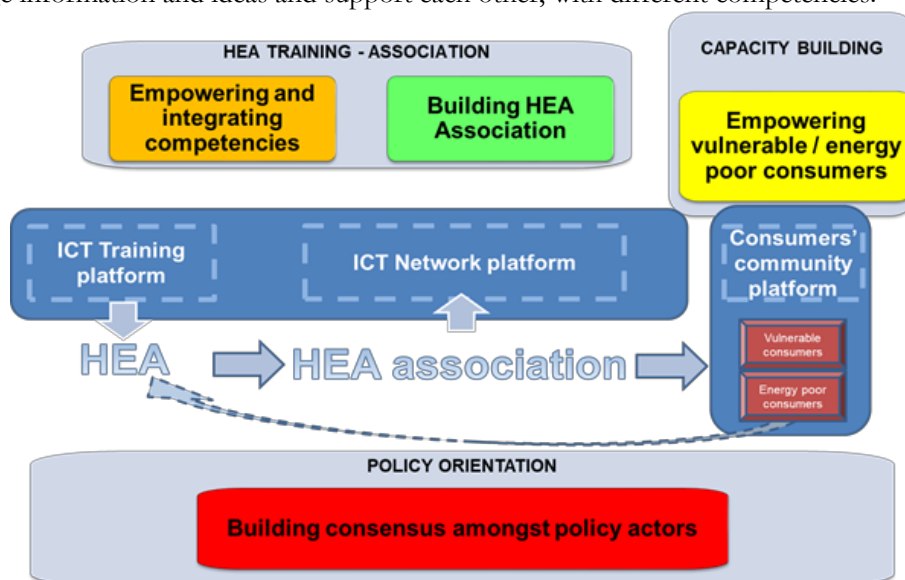
- Increase in energy efficiency (toe/y);
- Reduction in energy expenditures (€) related to behaviour or change in energy contract/request for subsidies;
- Increase in comfort perception (either subjective or measured through temperature control from consumers);
- Increase in social status perception, related to the first two (more economic availability and higher comfort help to open-up the house to external visitors, for example).

At the moment (February 2019) the first actions are starting, so there are still no numerical results. However, for the people reached by energy cafés, a reduction in energy consumption of 2% with regards to their previous situation is expected. For those involved in dedicated consultancy, it is expected an equivalent reduction (that takes into account all the above mentioned parameters) of 7.5% with respect to the baseline.

4. HEA NETWORK

HEAs are supported by project partners and, moreover, by HEAs national and EU networks: through a dedicated space on Moodle platform, they can connect with all the other trained HEAs, with different skills and backgrounds, and enrich their experiences, by comparing them. On the platform, they can:

- Find tools to support the advice actions (e.g. short factsheets on different topics, including how to get a subsidy or how to read an electricity bill);
- Find support material to disseminate their events, and short guides on how to organize them (e.g. templates for energy café organization);
- Connect with all the HEAs in their own country or connect with all the HEAs in the EU network, to exchange information and ideas and support each other, with different competencies.



[Figure 1] HEAs training and network structures

The HEA network is very important because it will guarantee the survival of the activity started during this years also beyond the 3-years duration of ASSIST projects established by the EU Commission, thus allowing a real impact to be obtained.

5. CONCLUSIONS

The issue of EP still represents a big challenge for all Member States in the EU and, despite the current effort, no definitive solution has been found to the problem. Many actions have shown that some solutions can be found to,

at least, effectively address the phenomenon on a local scale: however, to obtain their replicability and scalability at the EU level there is still a long way to go.

In order to try to address the EP issue and provide some concrete and effective tools, the ASSIST 2gether project is building a model based on the role of a new figure (called HEAs, Home Energy Advisors); they are usually professionals already operating in the fields of energy, social sciences, consumers associations, charities or similar organizations, who are trained in order to be able to communicate with energy poor consumers and guide them to optimize their consumption. The training of the HEAs is performed in a blended mode, mostly through an online platform and partially with in-person lectures or webinars. In order to support energy poor consumers, HEAs will implement engagement activities and pilot actions, sometimes in synergy with other projects. HEAs will then monitor the results of their actions and report to the project partners, through the online platform. The same tool can be used by HEAs to keep in touch, to support each other and to compare their activities both at national and EU level. The goal of the project is to understand which strategies are more effective in tackling energy poverty and to support policy makers in pursuing them, through the preparation of policy recommendations.

The first results obtained so far have proven that the ASSIST 2gether approach is successful, therefore all the ASSIST 2gether partners will work in the next months to strengthen the ASSIST 2gether approach and both consolidate the already obtained results and explore new actions to be implemented.

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