UsersTCP

Hard-to-Reach Energy Users

Subtask 2: Case Study Analysis

Italy

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Contents

Preface

This report was developed under the 'Users Technology Collaboration Programme (TCP) by the International Energy Agency (IEA) Task on Hard-to-Reach (HTR) Energy Users'. The Task aims to provide country participants with the opportunity to share and exchange successful approaches identifying and better engaging HTR energy users. Under the Task, HTR energy users are broadly defined as *'any energy user from the residential and non-residential sectors, who uses any type of energy or fuel, and who is typically either hard-to-reach physically, underserved, or hard to engage or motivate in behaviour change, energy efficiency and demand-side interventions*'.

Outcomes from the Task indicate that HTR energy users involve, for example, renters and landlords; low- and high-income households; the MUSH (municipalities, universities, schools, and hospitals) sector; small to medium enterprises / businesses (SMEs / SMBs); and people exposed to intersecting and compounding vulnerabilities based on factors such as age, race, gender, minority status, geographic, linguistic, technological or social isolation.

The case studies presented in this report aim to offer insights into programmes that aim to better engage HTR energy users in Italy. Particular attention is given to design, implementation and behaviour change aspects. Other country case studies developed under the Task also include: Aotearoa New Zealand, Canada, the Netherlands, Portugal, Sweden, the UK and the U.S.

We would like to thank all participating countries, their authors, and the interviewees who provided insights into their programmes targeting the HTR. I would like to particularly like to thank our National Experts and any national experts who undertook peer reviews.

All case studies can be found on the project's website.

Dr Sea Rotmann
Task Leader
Users TCP by IEA Task on HTR Energy Users
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Country background: Italy

In Italy, there is no official definition of end users living in conditions of hardship which does not allow them to adequately live their daily lives without having to struggle to fulfill their needs. The only information that can be found are a criterion based on high level of energy expenses contained in the *National Energy Strategy*[1] and a criterion to establish if households are eligible or not to receive a subsidy called "social bonus" to help them pay their electricity, gas and water bills: these definitions identify the so called "vulnerable" or "energy poor" end users.

It is evident, therefore, that many other categories of end users who would need support are left out by such broad definitions. These definitions should thus be updated in order to broaden the criteria identifying the end users requiring external support and assistance. Some proposals exist to engage these hard-to-reach end users, but the target of almost all activities carried out in Italy is composed of end users falling in the above-mentioned criteria. This is also the case of the ASSIST2gether project[2], as it will be described below.

Reasons for Energy Poverty in Italy

Italy has always been characterised by higher costs of energy paid by its citizens and enterprises with respect to many other European countries[3]. This is due to several reasons such as, for example, the dependence on the importation of fossil fuels (gas in particular), the consistent share of taxes burdening the final price paid by the customers, and the presence of bottlenecks on its power grid. The situation is not improving, since, over the past 15 years, the growth in the costs of energy raw materials, together with decarbonisation policies, have exerted constant pressure on the prices of goods and energy services, which, in turn, caused an in increase in end users' expenditures. In fact, prices paid by Italian families grew by 35 percent for electricity and 23 percent for gas, in the last decade, at a trend much larger than inflation. A further acceleration of these trends can contribute to making energy expenditure one of the main factors of vulnerability for Italian households. The increase in prices, despite the substantial stability of energy consumption, led to an increase of energy expenditure, whose incidence in total went from 4.7% in 2007 to 5.1% in 2017[4].

Defining Energy Poverty

This is particularly true for the vulnerable and energy-poor families; energy poverty is, in fact, becoming increasingly important in the European Commission agenda, mostly due to the

[1] Strategia Energetica Nazionale, https://www.minambiente.it/comunicati/strategia-energetica-nazionale-2017.
[2] The ASSIST2gether project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 754051. More details about the project can be found in www.assist2gether.eu.
[3] Natural Gas price for household consumers: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Natural_gas_price_statistics#Natural_gas_prices_for_household_consumers
Electricity prices for household consumers: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Electricity_price_statistics#Electricity_prices_for_household_consumers
[4] Banca d'Italia, Questioni di Economia e Finanza 240, available at: https://www.bancaditalia.it/pubblicazioni/qef/2014-0240/QEF_240.pdf

high number of EU citizens affected by it[5]. The efforts of the European Commission are mostly focused on implementing effective policies to tackle the phenomenon, while leaving each member state free to customise the local regulations to the country-specific situation. One of the main issues in tackling energy poverty, both at the European and national level, is related to the definition of what an energy-poor consumer is, and which are the most effective measures to support him/her. In Italy, as already said, there is no official definition of energy poverty, but there are two criteria that can be used:

1. In the *National Energy Strategy*, a criterion based on high level of energy expenses and being under the line of "relative poverty" is proposed as a measure to monitor the trend of energy poverty in Italy;
2. The law that institutes financial measures for low-income families and its subsequent updates foresee an ISEE (equivalent income) lower than 8,107 €/year (lower than 20,000 €/year for families with more than 3 children) to receive a subsidy for energy bills payment (the so-called "social bonus", as mentioned before).

Using the two above mentioned criteria, RSE has estimated that about 12% of the Italian population can be considered as energy poor or vulnerable. Two main groups of vulnerable consumers can be identified: the first is composed of single people, living in the North of the country, with very high energy expenditures, while the second is composed of people living in the southern parts of the Country (South and Islands), with no heating system, district heating or who are not connected to the network, with low energy expenditures but also poor network services and living in relative or absolute poverty.

It is therefore evident that energy poverty represents a social issue, subject to the attention and study by European and national governments, especially in the light of the serious economic problems that have affected the global economy in the recent years, and also in view of the pressures to have a stronger European commitment towards environmental sustainability (decarbonisation) which will inevitably lead to a further increase in costs for families. All these aspects must be taken into consideration by legislators to implement effective policies to mitigate the phenomenon.

[5] European Committee of Regions, *Multilevel governance and cross-sectoral cooperation to fight energy poverty*, 2019. Available at: https://cor.europa.eu/IT/our-work/Pages/OpinionTimeline.aspx?opId=CDR-5877-2018.

Methodology

The overall methodology followed the co-designed CSA methodology and template (Rotmann *et al*., 2021). Our HTR Task follows a recently-developed research framework by See Change Institute, called 'The ABCDE Building Blocks of Behaviour Change' (BBoBC; Karlin *et al.*, 2021). The ABCDE Building Blocks framework serves as a systemised and data-driven approach to designing, implementing, and evaluating behaviour change interventions, including for those aimed at HTR audiences. These Building Blocks include (see Fig. 1 in Karlin *et al.*, 2021):

- **A**udience: the pilot or programme's intended participants
- **B**ehaviour: the specific behaviour the programme intends participants to change
- **C**ontent: the programme strategy and approach
- **D**elivery: the mechanism and timing of the intervention (e.g. delivery may happen through door-to-door interactions or social media, etc.)
- **E**valuation: the way in which programme success is measured or otherwise assessed

Throughout the development of these case studies, it became clear that some of the building blocks applied more readily to these programme examples than others, as discussed in more detail in the General Discussion section of this document. As will become apparent in each case study, Content and Delivery are often closely linked. Given that certain content lends itself more readily to specific delivery channels, it can be a bit tricky to untangle which was content and which was delivery. The other building blocks, for the most part, proved more straightforward to apply to these concrete programme examples.

Methods of Data Collection for each CSA

The methodology to develop the case studies is simple, and is composed of the following elements (from Mundaca, 2021).

First, the case studies were chosen based on the outcomes of previous activities undertaken by the Users TCP HTR Task. As indicated in the previous section, these activities aimed to identify and characterise HTR audiences in participating countries. To that end, a variety of data sources were used, including an international survey, interviews with experts and practitioners, and a literature review (for details, see Ashby *et al.*, 2020a and b; Rotmann *et al*., 2020). We then reached out to our funders and other stakeholders to identify the most appropriate CSAs for Italy.

From an analytical point of view, the approach adopted the BBoBC framework developed (for details see Karlin *et al*., 2021; and Rotmann *et al.*, 2021). Data gathering was guided by an interview protocol that addressed each building block, and the set of questions can be found in Rotmann *et al*. (2021). Finally, the case studies were supported by a review of official documentation and related journal publications. This phase also included the analysis of information found on the websites of the four initiatives, and multiple (*ex-post*) evaluation reports and papers.

Italian Case Study – Residential

Background

The presented case study is the Italian pilot action of a wider H2020 project, *ASSIST2gether*, which aims to design a standardised process or intervention to tackle energy poverty, based on a holistic and ground-based approach. The project, funded through the Horizon 2020 programme, ran from 2017 to 2020 and involved 11 partners from 6 European countries (Belgium, Finland, Italy, Poland, Spain and the UK), plus a pan-European association (EAPN, European Anti-Poverty Network).

At a global level, the project empowered different types of operators (social workers, charity volunteers, consumers associations and trade unions workers, high-school and university students, health workers, utilities workers, etc.), working on energy poverty-related issues, in order to provide assistance to energy-poor households, in addition to other support services already provided during their day-to-day activities. It encouraged the training of empowered operators, named **HEAs** (Household Energy Advisors), who were so-called “Middle Actors” coming from different energy- and social-related professional backgrounds. Their task was to carry out pilot actions to provide advice and support to vulnerable consumers.

The actions of the HEAs were designed with a bottom-up approach – based on some action categories, proposed by the project partners, it was left to the HEAs to suggest the actions to deliver the advice to each type of households they were addressing. This approach was decided in order to engage the HEAs from the initial phase of the pilot design, and to ensure roll-out of a robust implementation phase. The project’s success was strongly related to stakeholders’ involvement from the beginning of the project.

Landscape and Stakeholder Analysis and agreeing on the WHY

The first step was the creation of the *Vulnerable Consumers Steering Committee* (**VCSC**), composed of 11 national experts on energy poverty, with different backgrounds: 3 administrators from municipalities, 2 energy providers from utilities, 1 policy maker from the Ministry of Economic Development, 1 financial provider from the Bank of Italy, 1 expert from university, 1 community provider from a trade union, 1 representative from a consumers association, 1 community provider from a charity. The choice for this stakeholder selection was made by project partners, based on their CVs, focusing on their experience on the energy/energy poverty sector, and on their “impact factor” assessed as their role in initiatives aimed at tackling energy poverty and policy making. For each participating country (6) there was a local VCSC, plus one at general EU level, composed mostly by personnel involved in the EU parliament decision making process and in overall EU organizations in the social and energy fields.

VCSC members were involved as consultants from the first phase of the project, right after the kick-off meeting, and they provided useful advice on how to plan the actions, how to measure the results, and how to involve both HEAs-to-be and vulnerable energy users. The overall goals and objectives of the project and the pilot (energy consumption reduction and number of energy users addressed) had been decided beforehand by the project partners,

but VCSC members advised them on how to make those goals more reachable. The goals set at the beginning of the project were quite ambitious, in particular the extent of energy savings targets for vulnerable consumers (7%). Thus, VCSC members' input was very valuable to re-define the objectives in other, more realistic, terms (as explained later in the document).

Moreover, some VCSC members were also directly involved in the organisation of external events, where project partners and HEAs were invited to promote the project and try and involve more people in the training and performing of pilot actions. Finally, several public events were held in order to involve a larger number of stakeholders from the energy and the third sector, with a wider stakeholder audience than that of just the VCSC. During both, the general events and VCSC meetings, the progress of the project was discussed between the project partners and the stakeholders and feedback was collected, both on what had been done and what was planned for the future.

In order to target the pilot actions properly, within the wider European project an in-depth analysis of energy poverty was carried out, both in terms of the political – strategical frame and implementation activities, as well as collecting insights on perception, needs and barriers of the vulnerable households. The general landscape analysis was carried out through literature review and interviews with national stakeholders as well as the organisation of events to promote dialogue between various actors. Moreover, a consumer analysis was carried out through an online survey addressing directly vulnerable energy users, together with statistical analyses on the levels of energy poverty and the characteristics of vulnerable energy users for each country.

One of the main barriers encountered in the implementation of the actions was the *General Data Protection Regulation* (GDPR, (EU) 2016/679), that was enacted in the middle of the project. This implied the need to redefine some privacy disclaimers and some privacy issues related to the collection of personal data through questionnaires in the online platform and the consequent storage of the data collected. After considering all the options, it was decided that the HEAs were responsible of ensuring compliance with the GDPR in collecting the data of the consumers and that the project partners would receive only anonymised consumer data.

Audience

Definition and characterisation of the target audience

The main target of the pilot actions were the so-called "energy poor" or "energy vulnerable" end users: unfortunately, a common and agreed definition of the previously mentioned categories does not exist at the Italian level, although the issue of energy poverty has an important place in the political agenda, especially during the COVID-19 pandemic (see Rotmann et al, 2021). In fact, it is well known that one of the initial barriers to tackle energy poverty is related to just reaching or classifying vulnerable consumers, which is extremely difficult in part because of the lack of a widely-recognised, clear definition (ibid).

In order to provide a quantitative audience size estimation of the target of our analysis, project partners decided to undertake a two-fold approach, as alluded to in the previous section:

- **STEP 1**: perform statistical analyses of available data collected by other bodies specialised in demographic data collection, such as the Italian national statistical agency (ISTAT);
- **STEP 2**: carry out dedicated surveys (both a market survey and a survey through a segmentation questionnaire) and further shape the results using think-tank and brainstorming events involving several stakeholders working in the field.

The final goal was to identify energy poor/vulnerable end users who became the main target of the *ASSIST2gether* actions, and who will be described in the next paragraphs: a prerequisite of the success of the actions was, in fact, to obtain a complete characterisation of the different end users which would have been addressed by the different measures implemented by the *ASSIST2gether* partners.

Results of the Audience definition work

With regards to **Step 1**, the starting point was data collected by ISTAT about a sample of families, which can be considered statistically representative of the whole Italian population and which describes their socio-demographic aspects, characteristics of their dwellings, appliances owned and their spending capacity (distributed for energy, food, house, etc.). RSE developed a methodology in order to obtain the required market segmentation using a cluster analysis and identify those clusters where there was a higher probability to find energy poor/vulnerable end users.

AUDIENCE DEMOGRAPHICS

The results show that at the national level in Italy, the families who can be considered most-at-risk to be energy poor/vulnerable belong to the three clusters: these clusters comprise especially people living in the southern parts of the Country (South and Islands), with no heating system, district heating or not connected to the network (e.g. gas cylinder). The family typology is quite diverse, however there are few insights about the type of housing (for two group the house is quite small (<98.5 m^2) while for the third it is bigger).

AUDIENCE PSYCHOGRAPHICS, BARRIERS AND NEEDS

With regards to **Step 2**, the interviewed groups were quite respondent to the national average, with some exceptions (e.g. the location of the households, that was influenced by the location of the cooperative/association where the questionnaires were held and/or promoted). One of the main results was that some target audiences appear to be interested in receiving energy advice; however, trust issues appear to be one of the major barriers. These range from concerns about giving access to their households to contractors, to privacy issues related to disseminating their energy bills. The most interesting result is, however, that many of them would be interested in getting energy audits or customised energy advice.

It is important to highlight that the number of collected answers to the surveys was quite low (around 100), and this is largely caused by the difficulty to engage vulnerable/energy poor end users through generic online tools (they could also fill the questionnaire at the associations/cooperatives' offices, but very few did). The importance of direct and face-to-face contact is thus evident: in fact, most of the surveys which were successfully completed were performed in person, and by trusted Middle Actors who already know the engaged vulnerable/energy poor end users. There were all those HEAs who were already in contact with the engaged end users (such as social assistants or volunteers from consumers associations who already had a portfolio of end users to help), and were thus able to perform *ASSIST2gether* activities together with their already planned activities.

In this sense, all the end users who could not be engaged through the *ASSIST2gether* activities, can be considered as "hard-to-reach". Unfortunately, face-to-face contact is a very expensive process, which could not be carried out widely due to the budget constraints of the *ASSIST2gether* project.

Behaviours

As mentioned earlier, the aim of the HEAs was to provide support on energy poverty-related issues. Therefore, the general target behaviours were focused on reducing energy consumption and costs (in rare cases eliminating energy waste, due to the already low energy consumption of the involved households, and more often verifying the contract conditions and switching to more favourable providers and power plans), thus empowering consumers to be less vulnerable within the energy market.

Other HEAs interventions (not related to the target behaviours) focused on delivering advice and support related to financial measures and helping households filing requests for subsidies, considering that bureaucracy is one of the main barriers in accessing them.
The above-mentioned behaviours were considered as those most related to the energy poor/vulnerable consumers who usually under-consume energy with respect to e.g. their comfort needs, and who usually are most vulnerable with respect to the energy market – including not being aware of their rights as consumers within this market.

There was no formal process for prioritising the target behavioural aspects, each case was assessed by the relevant HEA, keeping in mind that the overall goal was to reduce the household energy consumption, through low-cost (e.g. mirroring panels behind radiators, installing efficient lamp bulbs, etc.) and behavioural measures (ventilate for few minutes, use wisely electrical appliances, lower the temperature in non-used rooms in winter, etc.), and utility expenses, as well as to increase comfort and energy awareness of the consumers.
The interventions of the HEAs were defined by the HEAs themselves according to their working context and in-home activities, and all the interventions implemented focused on the above-mentioned target objectives (reducing energy consumption, choice of the energy contract, and empowerment of vulnerable households with respect to their place in the energy market).

As already mentioned, the main aim of all the interventions of the HEAs was to address problems related to energy poverty – energy cost and energy consumption – in order to

better manage the financial resources and the energy costs/consumption to be able to fully satisfy the basic energy needs. In general, all interventions were aimed to make people more aware of the logic and dynamic of the energy market, and of the rights of consumers (as clients of the market), especially in relation to the specific contractual situation as well as to verify the consumption habits.

Content

Engagement strategy

The pilot action was planned in two phases. The first phase was mainly conducted by the partners, investigating similar initiatives in Italy and other European countries, analysing their strengths and weaknesses and identifying some options that, with a re-design, could be adapted to the project scopes and replicated in different contexts (landscape analysis).

In the second phase, experts from different fields were involved:

- Members from the *Vulnerable Consumers Steering Committee* (VCSC), that, as previously explained, was a small and heterogeneous group of national experts on Energy Poverty;
- Stakeholders from various sectors, such as consumers associations, social workers, health workers, teachers, energy and utilities, social housing, etc. through two so-called “Think Tank Events”.

In the first phase, after examining literature and previous case studies, three main possible action categories, to be performed by HEAs, were identified:

- *Energy Cafés*: general events, designed to involve people and to make them aware about energy and environmental issues, but also to make them familiar with the project, the pilot actions and the chances offered by dedicated consultancy to vulnerable consumers. The aim of these events was to address all types of consumers, thus “spreading the word” about energy efficiency and energy-saving behaviours while avoiding stigmatisation, and then to involve vulnerable consumers into more specific activities.
- *Dedicated Consultancy*: identified either as a second step, after the Energy Café, or as a first activity carried out by specific Middle Actors (e.g. charities, consumers associations, social housing), it consisted in providing, for free, information about energy efficiency and behavioural energy savings and “low cost” items (e.g. shielding for heating radiators) that could be affordable for energy-poor consumers. Moreover, some practical support was given to vulnerable people in reading and understanding their energy bills, changing their energy supplier or energy contract to a more affordable one, and asking for subsidies.
- *Synergies*: identified as activities, belonging to one of the previous two categories, performed in cooperation with other projects, e.g. when a municipality was already financing the renovation of social housing, a complementary activity of energy education could be provided by the project-educated HEAs.

In the second phase, outlined above, VCSC members and participants to think-tank events were asked to provide their feedback about the pilot actions, the target consumers and the proposed training course for HEAs.

The consulted people during *Think Tank* events were around 100 actors in the field of Energy poverty, distributed as follows:

- 19% from university and research;
- 26% from public institutions;
- 29% from private institutions;
- 26% from non-profit institutions.

During these events, the project strategy was presented and discussed, together with the engagement strategies for vulnerable consumers.

The three action categories proposals were approved, and the design was refined thanks to the inputs from experts and Middle Actors. They agreed to the idea to engage vulnerable consumers through either Energy Cafés or physical helpdesks already managed by organisations such as consumers associations.

Messaging

Dissemination strategies were decided at project level by all the involved partners. The partner responsible for communication (*Ecoserveis*, from Spain) supported the others in explaining how to increase the effectiveness of the message and in creating captivating designs for web- and social networks pages.

Energy cafés and helpdesk support were mostly promoted through social networks, both at overall project level and through single associations networks (e.g. pages of the consumers association local office) and through the hanging and distribution of printed material (e.g. flyers in the social services/charities offices, etc). For each country, there was a dedicated Facebook page for HEAs and consumers, in which all the events were promoted, together with general tips on how to save energy or relevant news about energy efficiency. For example, for Italy, the related page was “Consumatoresmart” (“Smart consumer”): https://www.facebook.com/consumatoresmart.

In both cases, consumers were first approached with general information messages about energy efficiency, through printed material that was visual and easy to read and gave suggestions on how to reduce their energy consumption and/or costs. Then, they were invited to a one-to-one meeting with a HEA, whose tasks were:

- To fill in an *ex-ante* questionnaire, with the scope understand the current situation of the household in terms of socio-demographic variables (people living in the house, disabilities, children, old people, other issues), building-related information (e.g. type of building, type of heating/cooling system, etc.), information on energy consumption and costs (through the provision of electricity and natural gas bills to the HEA), information about perceived comfort and consumption habits;

To provide specific advice, customised on the information gathered through the questionnaire, and to support the consumers in changing both their habits and those features that implied higher energy consumption/costs, e.g. change energy providers, request subsidies, etc.

- To follow-up with the family, for example through phone calls, in the next months (ideally for a year, due to some issues in the project it was reduced to 6-10 months) and fill in, at the end of the consultancy time, an *ex-post* questionnaire to evaluate the success of the action in terms of energy savings, cost savings, increased comfort and increased awareness.

Finally, HEAs reported all the performed activities through a dedicated online platform (in moodle[6]), where the training course, support material and suggestions for HEAs were also uploaded by the project coordinators. Moreover, in this platform they had the chance to interact with other HEAs through the HEA network (both at national and EU level) and to work together or exchange experiences and information.

Delivery

Delivery mechanism

A nation-wide social and traditional media campaign[7] was launched by the project partners to inform potential Middle Actors of the training and networking opportunities as HEAs. Another campaign was launched to increase awareness on energy poverty and promote the existence of the HEAs and their support actions in relation to energy poverty. However, the most effective communication channels were the ones already existing between the HEAs and the target audiences. As mentioned earlier, the HEAs were operators already working on the ground with direct and trusted relationships with vulnerable households.

Messengers and communication channels

The *ASSIST2gether* project partners (coming from private sector as knowledge and capacity building company and public institutional actors) were the main promoters of the pilot actions at the national level. The communication channels were the partners' websites and social media accounts, and the channels activated for the project (*ASSIST2gether* website in Italian and *ASSIST2gether* social media accounts). The project partners' media offices were also used for the distribution of press releases at the national level. At the local level, on the ground the HEAs in their working contexts were promoting the actions through their networks.

[6] https://assist.aisforacademy.eu/index.php
[7] Some examples:
https://www.canaleenergia.com/rubriche/efficienza-energetica/lotta-poverta-energetica-assist/
https://www.sostariffe.it/news/tutor-per-lenergia-elettrica-cose-e-come-funziona-276796/
https://www.canaleenergia.com/rubriche/consumer/soluzioni-alla-poverta-energetica-e-nuove-figure-professionali/
https://www.ansa.it/canale_ambiente/notizie/focus_energia/2018/09/26/soluzioni-alla-poverta-energetica-e-nuove-figure-professionali_b86d0a73-3006-40b0-be1e-2ebecce6b934.html
https://www.avvenire.it/economia/pagine/energia-domestica-nascono-i-tutor
https://www.corriere.it/economia/18_settembre_25/bollette-arriva-tutor-l-energia-domestica-ffd04054-c0bd-11e8-8c2f-234b69fe8a3d.shtml

Timing

The interventions were carried out by the HEAs only after they had successfully ended the training course. The training course was launched in September 2018 (following the course preparation phase related to the project workplan) and the registration was open until the end of the project. The interventions were therefore delivered over a two-year timespan by the HEAs, in different timespans according to their activities and other obligations.

Evaluation

Evaluation methodology, metrics and targets

The evaluation of the success of pilot actions was performed based on different impact and outcome metrics:

- Number of involved HEAs, both that started the training and that completed it;
- Number of involved energy users in general events (and with “light” information);
- Number of energy users followed up with dedicated consultancies;
- Energy savings (in % reduction) triggered with the action;
- Increased levels of self-reported awareness / empowerment and comfort.

The initial targets (for each country involved in the project) were:

- Involvement of 150 HEAs in the training course;
- 75 HEAs with full training;
- 2,000 energy users reached with “light information”;
- 750 energy users reached within the pilot action;
- 2% energy savings for 2,000 energy users reached with “light information”;
- 7% energy savings for 750 energy users reached within the pilot action.

All the KPIs were monitored through the *moodle* platform. In particular, all HEAs were registered and their progress in undertaking the training was recorded automatically as soon as they completed each module of the course.

Through the HEA network page in *moodle*, they had to report:

- The number of energy users involved with Energy Cafés and similar activities, that were considered as reaching the goal of 2,000 energy users reached with “light information”, that were supposed to achieve 2% energy savings through the application of, at least, part of the suggestion provided in those events;
- The *ex-ante* and *ex-post* questionnaires collected through the dedicated consultancies, containing the detailed information about the number of engaged consumers, their energy consumption and costs before and after the action and their level of comfort and awareness before and after the action.

While performing the characterisation of energy-poor consumers, it was clear that the goal to achieve 7% energy savings was unrealistic, due to the already low consumption of those families. In agreement with *EASME* (the body that was involved by the European

Commission to manage the project), it was decided to create two KPIs that allowed to consider not only energy savings, but also benefits for the family derived from lower energy costs, access to subsidies, increased comfort and improved awareness.

The two KPIs were defined as follows:

- *ASSIST2gether Energy Saving Indicator* (ESI): considering Energy savings +/- a weighted average of a comfort indicator and of cost savings indicators, both expressed as a percentage;
- *ASSIST2gether Vulnerability Empowerment Factor* (VEF): taking into account the difference in awareness declared, through 5 specific questions, in the *ex-ante* and *ex-post* questionnaires, with a score from 1 to 5; expressed as an average of the difference, VEF can, therefore, vary between -4 (people knowing "less than before" or being more confused) and +4 (people fully empowered and confident), with 0 as the "neutral" condition.
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As for the previous steps, VCSC members were consulted and they agreed on the methodology.

Results

For the Italian case, the following results were obtained:

- 233 HEAs were registered to the training, 122 fully trained (+1,231 high-school students involved in a soft training and material distribution in home appliances shops);
- 7,149 energy users reached with "light information" and considered to have reached 2% energy savings;
- 618 energy users reached through dedicated consultancy, with the following average results:
    - ESI equal to 5.5%;
    - VEF equal to 0.4.

In order to evaluate the overall project methods, the pilot actions and the overall project results underwent a SWOT analysis, with the following results:

SWOT	Notes
Strengths	Consumer associations volunteers and employees were amongst the more successful HEAs. This is due to the fact that the associations are strongly rooted in the local context, and thus are able to identify the consumer who are more in needs to receive support. For social workers, home visits allowed them to see the real living conditions of the audiences and to provide more precise advice relative to their context.
Weaknesses	A long time is required to carry out support actions due to the difficulties that might arise in the interaction with vulnerable families, often located in a challenging environment.

	For the home visits performed by social workers, they were time consuming; in particular, each home visit requires time to organise the meeting and time to carry out the visit.
Opportunities	Actions carried out by consumer associations can really be effective due to their deep integration in the territory, which allows the persistence of the actions over time. For social workers, home visits may represent an opportunity to reduce risks related to other issues (health, fire, social isolation, etc.).
Threats	For helpdesks, no threats were identified. However, home visits may lead to dangerous (or non-comfortable) situations.

General Discussion

The overall output of all the *ASSIST2gether* activities carried out in the Italian context can be considered successful and the obtained results are satisfactory. Unfortunately, it was not possible to implement all the activities planned at the beginning of the project, due to the difficulties and the challenges encountered during the three years of project development: the short timing of the *ASSIST2gether* project (and of EU funded projects in general) requires a detailed planning which does not leave much room to face potential unexpected events and difficulties; such elements, unfortunately, have a large probability to arise when dealing with challenging circumstances such the ones in which vulnerable consumers live. However, the HEAs who participated in the different *ASSIST2gether* activities (soft / engagement activities, actions and synergies) gave a positive feedback about audience involvement, gathered through a final questionnaire. They appreciated, in particular, the training programme, which allowed them both to learn new things and to update their previous background about the issues related to energy poverty, and the creation of the HEAs networks (both at local and European level), which allowed them to get in contact with other HEAs belonging to different organisations in other countries, with mutual benefits.

Their only complaints were about the limited time available to carry out *ASSIST2gether* actions (due to short duration of the whole *ASSIST2gether* project, which forced a rapid pace for all the activities) and small amount of money[8] to cover all their expenses, which had to be financed by external sources.

Luckily, as a result of the commitment and dedicated effort of the Italian partners, the missed activities were successfully replaced by some others; this was possible thanks to the engagement events carried out during the whole project, which have led to the creation of a large stakeholders network with many actors willing to cooperate with the *ASSIST2gether* partners and implement activities in the field. Most of the involved actors carried out the activities on a voluntary basis, in the framework of some consumer associations or non-profit organisations, thus they were already aware of the importance of the energy poverty phenomenon and all the issues related to it. Although it was not possible, due to the above mentioned difficulties, to fulfill the required target of engaged vulnerable energy users by the end of the project (it ended up about 100 users shorter with respect to the target, which was 750 energy users), this helped to boost the efficacy and the extent of each activity (and especially the actions) carried out within the *ASSIST2gether* framework.

[8] All HEAs performed the activities on a voluntary basis. Some of them requested a refund and, with the few available funds, they were given 10 euro per followed household.

One of the main conclusions is that the third sector plays a fundamental role within the Italian society, in particular to address all those areas in which State support is limited and/or has some deficiencies, thus improving the welfare for those people who risk to be left behind. Such a strong involvement of the stakeholders dealing with vulnerable consumers in their daily activities (and, in particular, those belonging to the third sector), was the core reason of the success of the *ASSIST2gether* project, although it would have been better to involve such stakeholders with a specific role (such as members of the VCSC) from the beginning of the project.

The final results in terms of the *Energy Savings Indicator* (ESI) and the *Vulnerability Empowerment Factor* (VEF) have also been presented: they can be considered positive and represent the litmus test of the effectiveness of the *ASSIST2gether* action at the Italian level. As mentioned above, the overall *ASSIST2gether Energy Savings Indicator* (ESI) is about 5.5% (slightly less than the expected target of 7%), a good level when it is taken into consideration that the annual consumption of vulnerable consumers in Italy is already much lower than the average end user's consumption (less than one third in some cases): this implies that the margin to further reduce their consumption by activities such as those carried out within the context of the *ASSIST2gether* actions is greatly reduced. One possible way to increase the energy savings is through other types of interventions such as, for example, the replacement of old windows with more efficient ones or of inefficient appliances with modern ones, but this went far beyond the scope (and the financial resources) of the project. Vulnerable households also experienced an increase in the comfort level inside their dwellings in the *ex-post* evaluation compared with the *ex-ante* evaluation, which were at least six months apart.

The value of the overall *Vulnerability Empowerment Factor* (VEF) is 0.4 and, even if it is not high, it can be considered a good value: people felt slightly empowered, after *ASSIST2gether* activities, and more involved in their energy choices. In particular, they already started from an intermediate level of awareness, so a large increase was unlikely to happen.

The overall impact of the HEAs activities can be considered successful and the proof of this are the improvements in the comfort inside the involved households and the positive value of the energy savings achieved, plus the slight increase in vulnerable energy users' awareness. Moreover, the involved households also gave positive feedback about the activities and the actions in which they were involved. In particular, the dedicated consultancy and the related material received by them were appreciated because they were tangible tools to be used, almost immediately, in their daily lives to improve their life conditions. This will be the basis upon which the continuation of the *ASSIST2gether* activities beyond the project duration will be built.

Recommendations and next steps

Lessons and recommendations

The following lessons learnt were drawn:

1. Create a strong partnership with already established networks/associations in the local context and involve them since the beginning of the project;
2. Allow more time to HEAs for the collection of both the ex-ante and the ex-post questionnaire to face the difficulties of interacting with vulnerable consumers;
3. Increase the time between the compilation of the ex-ante questionnaire and the ex-post one, in order to monitor a longer period;
4. A detailed plan on which information to send to consumers and how to organize them should be defined well in advance;

Consumers should be divided into target groups and more tailor-made information should be provided to each of them.

Next steps / future research

The *ASSIST2gether* model and the interventions of the HEAs were initially designed only as a pilot phase within the European project. However, considering the positive impact of the model, at the end of the ASSIST2gether project (July 2020) a proposal was submitted within the European *Social Catalyst Fund* for the scaling up of the model. The EUSCF considered the *ASSIST2gether* model as one of the 7 most significant social models (not only addressing energy poverty) and within the *SUITE* project some of *ASSIST2gether* partners are now working to scale the project by building on the experience of *ASSIST2gether* as well as similar models already active in Europe – such as the *RAPPEL* network in France or the energy scanners in Belgium.

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