



# Vulnerable Consumers and Fuel Poverty Report



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 754051

### **Copyright message**

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both. Reproduction is authorised provided the source is acknowledged.

**Disclaimer** Any dissemination of results reflects only the author's view and the European Commission is not responsible for any use that may be made of the information it contains.

# Table of Contents

<b>1</b>	<b>Presentation of Assist Project.....</b>	<b>7</b>
1.1	ASSIST overview and introduction .....	7
1.2	WP2 – In depth knowledge on Consumers Vulnerability / Energy Poverty.....	7
1.3	Document overview and structure .....	8
<b>2</b>	<b>Executive Summary .....</b>	<b>9</b>
2.1	Best Practice Guide on Financial Measures.....	9
2.2	A summary of the National and European measures addressing vulnerable consumers and energy poverty .....	11
2.3	Replicable Best Practice National and European measures .....	11
2.3.1	National Initiatives.....	12
2.3.2	EU Initiatives.....	13
2.4	European Market Survey on Vulnerable Consumer needs.....	13
2.4.1	Stakeholder Surveys.....	14
2.4.2	Consumer Surveys .....	16
<b>3</b>	<b>Best Practice Guide on Financial Measures .....</b>	<b>17</b>
3.1	“ASSIST database on financial measures to support consumers in their domestic energy consumption” .....	17
3.1.1	Activities realized and methodologies employed .....	18
3.1.2	Building common online database .....	18
3.1.3	Analysis of existing financial measures in each country .....	19
3.1.4	Mapping and coding the single financial measures .....	20
3.1.5	Uploading the forms on the online database.....	20
3.1.6	Promoting the database and its use amongst to both target end-users: HEAs and consumers.....	20
3.2	Existing Financial measures in each ASSIST country to support vulnerable consumers or in energy poverty .....	21
3.2.1	Overview.....	21
3.2.2	Existing Financial measures .....	24
3.3	The “best” financial measures to tackle energy poverty in each country .....	35
3.3.1	Overview of existing financial measures .....	35

3.3.2	ASSIST “Best” financial measures .....	36
3.3.3	Methodology for ASSIST “Best” financial measures identification .....	42
3.3.4	Identified “best” measures .....	44
<b>4</b>	<b>A summary of the national and European measures addressing vulnerable consumers and energy poverty.....</b>	<b>65</b>
4.1.1	Methodology .....	65
4.2	Summary of National Measures .....	68
4.2.1	How have different Member States defined issues of energy poverty and vulnerable consumers? .....	68
4.2.2	What different measures have Member States put in place to address the issues of energy poverty and vulnerable consumers? .....	73
4.2.3	What are the similarities/differences across Member States with respect to recognition and definition of the issue, and policy measures implemented to address the issue? .....	78
4.3	Summary of Selected EU projects.....	79
4.3.1	The focus on vulnerable consumers and energy poverty - the way vulnerable consumers and energy poverty are addressed; .....	79
4.3.2	Summary .....	84
<b>5</b>	<b>Replicable Best Practice National and European Measures .....</b>	<b>85</b>
5.1	Methodology .....	85
5.1.1	Methodology of Reviewing National Initiatives .....	85
5.1.2	Methodology of Reviewing EU Initiatives .....	85
5.2	National Initiatives: Best Replicable Practice.....	85
5.2.1	Italy National Initiatives .....	87
5.2.2	Belgium National Initiatives .....	89
5.2.3	Spain National Initiatives.....	91
5.2.4	Poland National Initiatives.....	93
5.2.5	Finland National Initiatives .....	95
5.2.6	UK National Initiatives .....	96
5.3	EU Initiatives: Best Replicable Practice.....	98
<b>6</b>	<b>European Market Survey on Vulnerable Consumer needs .....</b>	<b>99</b>
6.1	Analysis Stakeholder Surveys .....	99
6.1.1	Italy Stakeholder Surveys .....	100
6.1.2	Belgium Stakeholder Surveys.....	102

6.1.3	Spain Stakeholder Surveys.....	109
6.1.4	Poland Stakeholder Surveys.....	114
6.1.5	Finland Stakeholder Surveys .....	114
6.1.6	UK Stakeholder Surveys.....	117
6.2	Consumer Surveys .....	121
6.2.1	Italy Consumer Surveys.....	122
6.2.2	Belgium Consumer Surveys .....	128
6.2.3	Spain Consumer Surveys .....	135
6.2.4	Poland Consumer Surveys .....	143
6.2.5	Finland Consumer Surveys.....	147
6.2.6	UK Consumer surveys .....	172

# 1 Presentation of Assist Project

## 1.1 ASSIST overview and introduction

ASSIST is a 36-months European ‘market activation and policy orientation’ project to tackle fuel poverty and support vulnerable consumers. Its aim is to both actively engage consumers with the energy market, helping them to positively change their behaviour in relation to energy consumption as well as influence the design of policy relating to energy poverty.

Based on the conclusion of the Energy Citizens’ Forum and the European Vulnerable Consumers Working Group, the project intends to combine activities addressing both energy and social dimensions as fuel poverty is not only an energy issue nor can it be tackled in isolation of the bigger issue of poverty. Specifically, the ASSIST strategic objectives are to contribute to:

- tackle fuel poverty;
- reduce the main barriers of the energy market experienced by vulnerable consumers;
- support vulnerable consumers to be more efficient with their domestic energy consumption (electricity and gas).

In order to fulfil its goals, the project foresees very diversified, but correlated, research, networking activities as well as in-field actions, consistent with the relevant national and European-wide scenarios.

ASSIST intends to create a network of innovative professional figures whose aim is to support vulnerable consumers with their domestic energy consumption, the Home Energy Advisors (HEA’s).

## 1.2 WP2 – In depth knowledge on Consumers Vulnerability / Energy Poverty

This report is one of a series of reports produced as part of Work Package 2 of the ASSIST Project. The objective of this work package is to both gain a more in-depth understanding of vulnerable consumers and energy poverty as a problem in European society and of the possible solutions to tackle it.

- The statistical data gathering, analysis and survey work that form the basis of this work package will allow for fine-tuning of the activities foreseen in the forthcoming work packages (mainly WP5 - ASSIST action). This data will also be used for the production of a “Vulnerable Consumers and Fuel Poverty Report” which will effectively be a summary of the 4 reports in this series. It is anticipated that this report

will represent an up-date to SeRENADE<sup>1</sup> on the social phenomena of consumers' vulnerability and more specifically of energy poverty and advice. It will assess how European Member States

- define the issue of energy poverty and vulnerable consumers;
- implement measures to address these issues; and
- address household energy needs and target energy efficiency measures to low-income households living in energy inefficient houses.

The analysis of the data gathered will guide the recommendations to be made by the ASSIST project for European policy changes, one that involves developing sound and efficient European policies that are also robust and effective in terms of market design. This work package will undertake a thorough analysis and mapping of consumer vulnerability and energy poverty in Europe, integrating the following aspects:

- Context of energy poverty across Europe and the governance of the actors (who does what and how);
- Database of existing financial measures put in place in all Member States to support vulnerable consumers and alleviate / tackle energy poverty,
- Database of public initiatives carried out and on-going to tackle the problem;
- Good practices identified that can be shared across Member States;
- National market survey on vulnerable consumers / energy poverty to better understand vulnerable consumer's energy consumption, habits, knowledge and awareness on energy efficiency.

## 1.3 Document overview and structure

The evidence collected in the previous tasks (and detailed in the relative deliverables) will be gathered in a unique and comprehensive report on "Vulnerable Consumers and Fuel Poverty". The deliverables of the previous tasks as well as the draft of the report, will be illustrated and discussed with National stakeholders and members of the Vulnerable Consumers Steering Committee (see task 7.2). The inputs and suggestions will be taken into account to finalise the report in order to prepare a working document to provide a clear picture in the countries involved of the social phenomena of vulnerable consumers and energy poverty and on possible solutions. The report will be widely disseminated to National

---

<sup>1</sup> The SeRENADE project (2006-2008) brought together several experienced advice providers to: Study and review existing advice provision in Europe; Make know-how on delivering advice easily available through an online energy advice toolkit and forum for exchange of knowledge and experience between skilled practitioners and new providers; Deliver a pro-active dissemination programme to promote the benefits of advice and the resources available. In terms of advice subject matter, the project is concerned with energy efficiency, renewable energy and sustainable transportation/mobility. Three client groups are considered: households, small and medium enterprises and local authorities.

and European stakeholders through the dissemination and communication activities (see WP6, WP7, WP8).

## 2 Executive Summary

### 2.1 Best Practice Guide on Financial Measures

The “Best Practice Guide on Financial Measures” deliverable intends to report the financial measures in ASSIST countries to support vulnerable consumers or consumers in energy poverty – the measures are also available to view as an online database (<http://database.assist2gether.eu/>).

The “ASSIST database on financial measures to support consumers in their domestic energy consumption” has been developed by ASSIST as a “live” database (continuously updated) of measures used in the countries involved, relating to vulnerable consumer protection and energy poverty. The database represents a tool to provide vulnerable consumers, as final beneficiaries of the measures, and the HEAs members of the national networks, as intermediaries supporting vulnerable consumers with a complete and comprehensive tool on the existing and open financial measure to be requested. The database tool includes all the existing financial measures and for each measure illustrates the trigger mechanism and reports the strength and weakness for each. The aim of the online database is to enable vulnerable consumers (assisted by the HEAs) to take advantage of existing financial support for their energy consumption.

The present document illustrates:

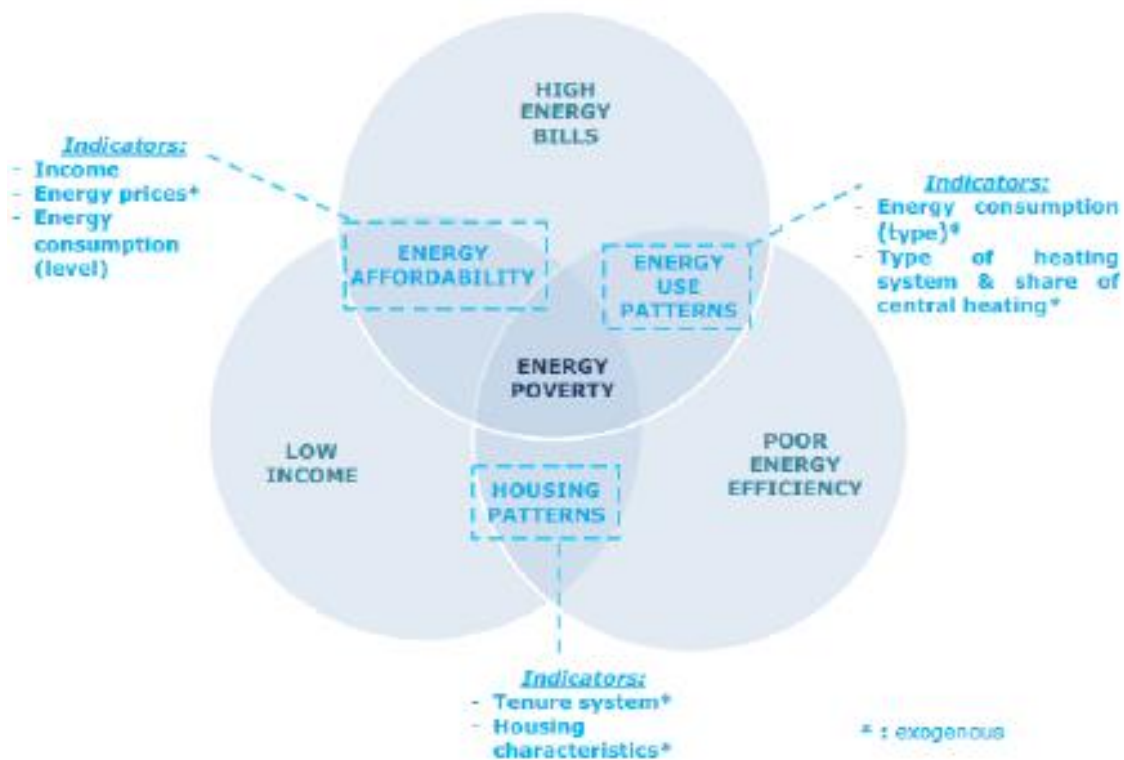
- Activities carried out to identify and map the existing financial measures in each country;
- Structure and use of the online database with the aim of facilitating the take-up of energy efficiency measures or the request of financial help through the existing measures; and
- Showcase all the existing measures, highlighting the strengths and weaknesses of each.

The mapping process of the all existing financial measures has not only fed into the online database with the aim of promoting the take-up of such measures, but has also delivered the necessary information to analyse and compare the existing mechanisms in different European countries in order to define best practices (D2.3 Replicable Best Practice of National and European measure).

Nowadays it is well agreed that energy poverty is not only related to low income but depends on several factors even though research is still ongoing to determine and relate all the causes of energy poverty. According to the e-Insight research, reported in the policy report on “Energy poverty and vulnerable consumers in the energy sector across the EU: analysis



of policies and measures”, the drivers of energy poverty are low income, high energy bills and poor energy efficient (see figure below).



**Figure 1: Drivers of energy poverty and key indicators**

In order to properly tackle energy poverty through financial measures within a coherent and homogeneous frame, it is important to keep in mind the following points:

1. The financial measures frame should include social / welfare measures as well as measures related to the energy bills and energy efficiency of households.
2. The financial measures frame should address all energy poverty drivers and the single measures should be linked and related to each other.
3. The financial measures need to be easy accessible (if possible through automatic mechanisms) for energy poor consumers in order to avoid low usage of the funding due to the lack of knowledge or to the bureaucratic barriers to request the help.
4. Energy poor consumers need to be informed on the financial measures through professional figures assisting them who need to have such competencies – including the ASSIST HEA (Home Energy Advisor).
5. A database of financial measures should be implemented and updated to facilitate the dissemination of financial measures and facilitate their use, such database should be provided to all actors dealing with energy poor consumers.

## **2.2A summary of the National and European measures addressing vulnerable consumers and energy poverty**

In carrying out the literature review that has been the background to this report and in the discussions that have taken place with individuals from across all member states, there are two interchangeable terms most commonly used to describe the issue we are addressing, 'fuel poverty' and 'energy poverty'. Thomson (2014b) found that the majority of official EU documents discussing the issue used the term energy poverty - "a situation where individuals or households are not able to adequately heat or provide other required energy services in their homes at affordable cost" Insight E report. In view of its widespread use, this report and the ASSIST Consortium, will also use the term 'energy poverty'.

In 2007 the European Commission Intelligent Energy Europe programme funded the SeRENADE project, an initiative that looked at the provision of energy advice across Europe. The final report identified 20 significant advice programs across Europe aimed at households. That work is now already 10 years old and during that time there have been many changes across Europe both politically and economically that will have had an impact on both the experience of energy poverty and approaches to it.

The purpose of this section is to carry out a mapping exercise on the progress that has been made, and the current state of play to address energy poverty since the SeRENADE report was published. Focusing on support and advice, we will be examining whether the programmes from 10 years ago are still running or have they been replaced and if so why and with what. This report will include an analysis of consumer vulnerability in terms of energy poverty in each European country, the governance and the actors involved – who does what and how? It will provide an overview for policy makers of the situation across Europe and between member states, both in terms of how energy poverty is perceived as a problem and what measures are being taken to address it.

Summarizing, the review of the selected EU projects depicts clear gaps as far as energy poverty reduction is concerned (between researches and interventions; social and energy stakeholders; consumer protection measures and measures aimed to adapt behaviour; informing and empowering consumers, etc.). However the review suggests as well many different opportunities to fill in these gaps on the basis of accumulated experience.

## **2.3 Replicable Best Practice National and European measures**

The "Replicable Best Practice National and European measures" reports the analysis and results of the National and European measures implemented to tackle energy poverty and results in the identification of replicable best practices. Building on the results of the previous task, the partners identified the best measures, i.e. best results and high replicability in other regions / countries. The identification of the best practices has been based on a range of

criteria including, but not exclusively, economic data, social data and policy data. On the basis of the defined criteria and weights, the partners analysed the identified measures and ranked them. Further the rankings from all partners were compiled and a list of the top ranked measures created. These will represent the replicable best practices.

So what can we learn from the analysis of the projects and initiatives already operating through Europe? As we have seen in reports 2.1 and 2.2, there is a wide range of projects tackling many different aspects of energy poverty. These of course do not stand alone, isolated from other important projects to reduce poverty in general or reduce energy usage. There are many overlapping elements that work hand in hand with other projects focusing on wider issues.

It is useful to look at the strengths and weaknesses of both the National, and then EU initiatives separately. As has been discussed in the previous reports, identifying and defining energy poverty is not a simple task, especially with so many differences in the economic, demographic and climatic landscapes for each country. What works well in one country would not be appropriate in another. But best practice can be identified in each individual country, and the strengths and weaknesses of EU projects can also be compared and analysed.

### **2.3.1 National Initiatives**

- In Italy there is a wide range of initiatives available and clear areas of strengths and weaknesses. The strengths include the Training for Energy Information and Advising (Sportello consumatore AEEGSI), the provision of Services for Vulnerable / Fuel Poor (Sportello consumatore AEEGSI) and Affecting Behaviour Change (Eni gas luce – Genius). Weaknesses could be identified in the areas of Research and Policy. The best performing initiative overall is Energia su Misura which is a pilot to monitor energy consumption of appliances in households.
- It is clear from the data from Belgium that there are several areas of provision that are not catered for at all by many of the initiatives. There is a good number of initiatives available however it seems that these all concentrate on very specific areas of energy poverty work. The highest performing initiative overall is Dampoort Knapt Op! that scored well in 5 of the 7 areas identified. The areas with least coverage are Research and Training for Energy Information and Advising.
- Spain has a wide range of initiatives available however some of those analysed are regional. The highest performing initiative, that incidentally performed well across all areas of the analysis, is Punts d'Atencio a la Pobresa Energetica (Barcelona). Although this scheme performed well in all areas of service and support, it is a regional scheme. The second strongest performing initiative (again across all areas) and highest performing national initiative is Fuel Poverty Group.
- From the two initiatives studied in Poland, it appears that they are quite polarized in terms of strengths and weaknesses. Where the initiatives performed well was in the areas of Policy, Consumer Engagement and in Providing Services to the vulnerable

and fuel poor. Improvements can be made however in the areas of Affecting Behavioural Change, Networking, Training for Energy Information and Advising, and Research.

- The situation in Finland is markedly different from in the other partner countries as there aren't any national initiatives targeting vulnerable consumers of energy poor households specifically. Instead there are initiatives in place advising consumers on energy efficiency. This service is provided by Motiva.
- UK projects have a clear distinction between those that offer purely financial assistance and those that offer advisory or supportive services to vulnerable clients. Those projects that offer financial assistance, although they have based their eligibility criteria on research, do not offer any advisory services once the funding has been provided. One suggestion would be to combine certain elements of both types of project to ensure a more rounded service for vulnerable clients.

### **2.3.2EU Initiatives**

Summarizing, the review of the selected EU projects depicts clear gaps as far as energy poverty reduction is concerned (between researches and interventions; social and energy stakeholders; consumer protection measures and measures aimed to adapt behaviour; informing and empowering consumers, etc.). However the review suggests as well many different opportunities to fill in these gaps on the basis of accumulated experience.

## **2.4 European Market Survey on Vulnerable Consumer needs**

This report is the result of analysis of both consumer and stakeholder surveys carried out in the countries involved in the ASSIST project (Belgium, Finland, Italy, Poland, Spain, UK). The aim was that these surveys complement the European Union Statistics on Income and Living Conditions (EU SILC) on the perception, needs and expectations of vulnerable consumers / energy poor in relation to energy efficiency.

This was carried out through a two-fold methodology: quantitative statistical data through a questionnaire addressing consumers and qualitative data through in depth interviews to selected national key actors and stakeholders. SWEA prepared a detailed questionnaire, interview framework and partner reporting template (for their findings) to collect information on:

- Individuals' perceptions and knowledge on their domestic energy consumption and energy consumption habits the correlation between knowledge and need to reduce energy consumption,
- use of existing targeted services for vulnerability and suggestions for services they would appreciate if available on the market,

- housing conditions to understand the real living conditions of the vulnerable consumer and energy efficiency measures implementation (who pays owner / landlord, when, why, etc.)
- use (if any) of subsidies or other financing opportunities – to better understand the reasons for requesting (or not requesting even if entitled) of financial subsidies;
- assess and monitor the causes and consequences of energy poverty in order to verify possible strategies and measures to face the problems of energy poverty rather than the condition itself.

All partners initially conducted in depth interviews with a relatively small group of 3 – 6 individuals per partner country. These initial interviews addressed both vulnerable consumers as well as energy / social stakeholders and aimed to collect information to define the questionnaire for the surveys (both quantitative and qualitative) and, if possible, also test preliminary draft version of the questionnaire. These initial in-depth interviews are not related to the interviews carried out in the qualitative survey.

## 2.4.1 Stakeholder Surveys

In **Italy**, the stakeholders identified five main issues that need to be tackled with regards to energy poverty. These are: a lack of an agreed definition of energy poverty; the identification and implementation of the correct financial instruments to help alleviate energy poverty; a lack of trust in the energy companies by consumers; the cost of energy bills (including the passing on of decarbonisation incentives to consumers and expensive energy efficiency measures) and; social and psychological barriers such as a lack of awareness or fear of being stigmatised when accessing certain benefits.

It was noted that whilst important to improve policy across the EU in general, each country would have their own unique energy landscape and characteristics and so different strategies should be employed for different countries.

Several actions are already being undertaken such as economic research projects to help define energy poverty, networking to support vulnerable consumers, and the establishment of not-for-profit organisations to help vulnerable consumers to access the available funding.

The stakeholder proposed 9 key goals for ASSIST: to share best practice; to improve the general understanding of the energy market; to engage with vulnerable consumers; to increase trust, to provide training for support organisations; to promote the fact that energy efficiency can help to tackle energy poverty; to influence policy; to agree on a common EU definition of energy poverty and; to frame energy poverty within the wider EU poverty policies.

**Belgium** identified five key issues to be faced: clarifying the link between poverty and energy poverty, and the problems involved in improving the quality of accommodation; the rising cost of energy prices (due in part to the incentives to switch to renewables and the subsidizing of green energy); the over-arching energy poverty policies in Belgium and the fact that vulnerable consumers are not always accessing the funds available to them; the

dis-connect between energy audits and energy efficiency savings and; the fact that the energy advice being provided is not always being acted on because of financial restrictions, no follow-up to the advice from the support service and that vulnerable consumer groups are often hard to reach.

There is substantial work already being done in Belgium to tackle energy poverty such as energy audits, home insulation projects, established not-for-profit organisations providing support and networking, policy proposals at government level and research projects to gather better data to inform policies. The aim of ASSIST would therefore be looking for how to improve the system and services already in place.

With that in mind the stakeholders suggested the following recommendations to be implemented through ASSIST: advice to be tailored more specifically for each consumer; make information more accessible to hard-to-reach groups; energy advisors to work more closely with other support agencies; emphasise the savings that can be made through tariff switching; address the structural issues in the Flemish region and; promote the work of 'energy-cutters' at EU level.

**Spanish** partners felt it was important to note three key points:

1. While there are many things being done in Barcelona more needs to be done in terms of a) coordination between organizations, b) communication to vulnerable groups and c) provide household assistance/aid;
2. There are many organizations working to tackle energy poverty, but they are not able to tackle the problem and reach places they would like to and therefore ASSIST could be very helpful to them and
3. There is awareness about the need to tackle the problem from a macro-level perspective.

A Stakeholder survey summary was not provided by **Poland** within the timescale.

**Finland** identified five main issues facing the country with regards to energy poverty and vulnerability: a lack of awareness of energy poverty; the current transition to smart energy systems is worried to increase total energy costs; lack of subsidies specifically for energy improvement; a more general lack of affordable housing and finally; the most likely consumers to be affected by energy poverty are likely to be those on a low income living in rural areas, which may be the hardest to reach.

It was acknowledged that there is already very good social security in Finland, as well as provision for energy advice.

Work is needed to target and reach the most vulnerable in society, where many different issues could be at play in the lives of the consumer, and this makes energy poverty fall down the priority ranking in some cases.

It was felt that ASSIST could help in: increasing the level of discussion on energy poverty, thus raising awareness; more research could be carried out to inform debate and policy; an agreed definition would help to clarify what help was needed and for whom and; it was important to listen to the consumer issues when deciding on future policies.



**UK** stakeholders pointed at a lack of investment, as well as a lack of consistency in policy across the regions of the UK as being major obstacles to progress in terms of alleviating energy poverty. There were also concerns over rising energy prices and a lack of energy awareness in the general public. It was also noted that the financial situation for vulnerable consumers was deteriorating in the wider context and that these consumers were the hardest to reach in order to provide support.

On a positive note, it was recognised that collaboration between different agencies was already taking place, not-for-profit support organisations were already well established, and training was already being provided by a range of these organisations.

Moving forward it was felt that stricter and more tightly enforced minimum energy efficiency standards should be legislated for, combined with further investment to improve properties and a more holistic approach to advice.

ASSIST would be able to help make improvements through creating real engagement with consumers and instilling a greater understanding and awareness of energy poverty in the general public. This could be done through the deployment of enthusiastic and knowledgeable volunteers who were able to access those people most in need and who were traditionally hardest to reach in terms of support and guidance.

There are clearly several key issues that are shared between all the partner countries such as a general lack of awareness, high energy bills, the fact that many vulnerable consumers are hard to reach to offer support, a lack of investment or correct financial instruments to offer assistance for making improvements to properties, and to a lesser extent (as some countries already have this in place) a lack of an agreed definition of energy poverty.

As mentioned in the summary from Italy, although each country will have their own specific characteristics and actions will need to be tailored accordingly, ASSIST will be able to provide learning on how to solve these common problem areas. Indeed work has already been undertaken to try to reach an agreed definition of energy poverty, and the project itself is helping to raise awareness of the issue in different countries. The volunteer projects will allow the ASSIST partner additional, invaluable information and feedback on how these common issues can be tackled.

## **2.4.2 Consumer Surveys**

A total number of 5453 consumer surveys were completed across the six countries, however 4661 of these were from Finland. Consumer surveys were disseminated online, face to face and over the phone. The main problems faced with collecting information were the limited access to the internet for target consumers, and also the time constraints of asking all the questions face to face or over the phone.

The surveys yielded similar results for tenure and property type across countries. The majority of consumers lived in the inner city or on the outskirts of a town or city, and was home owners. Most properties were built prior to laws on energy efficiency and insulation.

Behaviours were also similar across countries. The main way in which consumers try to reduce energy consumption is by switching off lights when they are not needed, followed by switching off unused appliances and turning down heating.

The majority of people would appreciate help from a home energy advisor, primarily on reducing the cost of energy bills.

Numbers receiving financial support towards energy costs varied significantly across the countries. Less than 1% of consumers surveyed received assistance in Finland, and similarly less than 2% in Italy. In the UK and Spain, 18% and 29% of consumers respectively received financial support, whereas over 60% of consumers surveyed in Belgium and Poland had been supported. For all countries, the main reason why people had not received financial help is that they didn't meet the criteria.

Data from Finland and UK shows that vulnerable people/ people on low incomes are likely to pay a larger percentage of their income on annual energy costs, than people on a higher income. This information is not available from the other countries.

## 3 Best Practice Guide on Financial Measures

### 3.1 “ASSIST database on financial measures to support consumers in their domestic energy consumption”

The Insight-E policy report on “Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures” (May 2015) recommended “Developing a database of measures used by different Member States, relating to vulnerable consumer protection and energy poverty. The Commission can play a strong role in information dissemination regarding effective and relevant measures.” (Recommendation 4). Sharing the recommendation and strongly believing in the added value of a financial measures database, the ASSIST consortium has built this database as a supportive online tool addressing the two main targets of ASSIST:

- consumers (in particular vulnerable consumers) informing them of the financial measures they may access in order to receive financial support to enable them to satisfy their domestic energy needs; and
- Home Energy Advisors (HEA) providing them with a tool which will enable them to assist vulnerable consumers access existing financial measures (which may be also used during the development of the ASSIST pilot to support vulnerable consumers).

The ASSIST database includes all the existing financial opportunities in the project countries (Belgium, Italy, Finland, Poland, Spain and United Kingdom) to support vulnerable



consumers to better fully satisfy their domestic energy needs. The database includes a wide range of financial measures – according to availability in each country, examples of existing financial measures present in the database are discounts on the energy bills, financial help for refurbishing households, tax deductions or cuts for installing or taking-up energy efficiency measures and so on.

Special attention has been given to identifying and including in the database all the financial measures which may be directly related to supporting energy poor / vulnerable consumers. Further to these measures, to create a wider and more useful tool (thinking of the possible support actions which the HEAs may deliver to the vulnerable consumers), measures addressing energy efficiency more generally, have been inserted

The next paragraph contains the detailed list of all the financial measures at the moment uploaded on the database.

### 3.1.1 Activities realized and methodologies employed

In order to analyse, identify and build an online database with all existing financial measures, the following activities have been implemented:

- Building common online database
- Analysis of existing financial measures in each country
- Mapping and coding the single financial measures
- Uploading the forms on the online database
- Promoting the database and its use amongst both target end-users: HEAs and consumers

### 3.1.2 Building common online database

To build the common online database two main activities were implemented: structuring and building the database as an ICT tool and defining the fields and the relative codes to map and identify the various measures

The first task has been to structure the database in order to enable in an easy manner the search function on behalf of the database end-users, i.e. vulnerable consumers or consumers in energy poverty which therefore may not have high ICT skills.

It was decided that the database would be based on a coherent encodings system:

Selection Code	<ul style="list-style-type: none"> <li>• Financial Instrument</li> <li>• Beneficiary</li> <li>• Sector</li> <li>• Type of Funding Activity</li> <li>• Fundable Activity</li> </ul>
----------------	--

	<ul style="list-style-type: none"> <li>• Type of funding Instrument</li> </ul>
Country of Origin Code	<ul style="list-style-type: none"> <li>• Country</li> <li>• Region</li> </ul>

In fact further to the geographical codes (Country / Region) and to the deadline, essential to enable a useful search function, it was agreed that other codes for each measure should be assigned: “Financial Instrument”, “Beneficiary”, “Sector”, “Fundable Action” and “Type of funding instrument”. For each code field identified, a series of specific codes (to be selected to identify and characterize the financial measure) have then been defined for the characterisation of each financial measure. The codes have been defined keeping in mind the sector of the database, specifically measures to tackle energy poverty and more generally measures to support energy efficiency and the beneficiary of the measures physical persons in energy poverty conditions.

In parallel with the structuring of the database (codes fields and single codes) also the structuring of the form describing the mechanism for requesting the financial measure was carried out. It was agreed that the form would be flexible in order to be filled in an easy to read and understand manner for consumers for all financial measures.

### 3.1.3 Analysis of existing financial measures in each country

As the database includes all existing financial measures to promote energy efficiency for vulnerable consumers it is important that all existing financial measures in each country are reviewed to identify those to support vulnerable consumers and address energy poverty.

Therefore the first activity undertaken was to identify the existing financial measures to support vulnerable consumers and address energy poverty through official documents detailing the terms and modalities for the request of the support (such as National Official Journals, Official Bulletins of the Local Authority, etc.) and monitor the publication of new measures. To identify and monitor financial measures, official sources at National and Regional level were used, such as:

- National Official Journals
- Official Bulletins of the Local Authority

Further to the main official sources, there are some financial measures which are not published in the official sources such as those from foundations, associations or banks. For these cases the information must be sought on the internet by monitoring and searching official and institutional websites. Even though the database is regularly updated it is important to note that it may not include all the measures existing from the private sector as there is no unique complete official source.

### 3.1.4 Mapping and coding the single financial measures

Once the financial measures have been identified it is analysed in order to:

- **Define the codes characterising the financial measures** (to be selected directly on the CMS of the online database),
- Draft the word informative document of the measure (to be copied in the relative field on the CMS).
- **Archive all the formal documents** - guidelines, norms, laws, forms to request the financial support, etc., to be annexed to the online form .

### 3.1.5 Uploading the forms on the online database

Once the codes characterising the measure have been defined, the informative form has been drafted and all the formal documents have been archived, the measure is uploaded on the database and may then be searched by the database end-user.

In order to ensure the reliability and goodness of the contents of the database, even though the informative document is written in an easy language all the formal documents are annexed together with forms to request the financial support.

### 3.1.6 Promoting the database and its use amongst to both target end-users: HEAs and consumers

Further to building the database and its contents, an important task is the promotion of the database to vulnerable consumers and HEAs.

To **HEAs**, the database promotion will be done mainly through one or more of the following channels:

- Communicating the publication of the database to all the members of the steering committee members and stakeholders (with focus to those invited in the think tank events),
- Training of the HEA, specific training units will be included in the HEA training course to illustrate the financial measures to support vulnerable consumers and the database and its use,
- Articles on ASSIST website as well as partners' ones and other stakeholders interested in promoting the database. Articles will also be written and published with links to the database whenever the database is updated with the upload of a new financial measure form,
- Embedding the database in the ICT platform for HEAs as a tool for the HEA activity.

To **consumers** the database promotion will be done through one or more of the following channels:

- Videos and factsheets on the financial measures and on the database will be prepared,
- Posting on ASSIST social accounts in a simple language,
- Embedding it on the portal / website for consumers,
- Inserting a presentation / article in events / newsletters addressing consumers.

## **3.2 Existing Financial measures in each ASSIST country to support vulnerable consumers or in energy poverty**

### **3.2.1 Overview**

The analysis of the existing financial measures in each country to support vulnerable consumers or consumers in energy poverty has underlined once again the dualism of energy poverty being a phenomena related to the social and energy dimension of consumers. In fact, it can be said that in all ASSIST countries the financial measures existing are those related to a discount on the energy bill (managed by the energy authority or other energy related institutional body) and those related to an economic support for living (including also basic energy needs as well as shopping need, mainly through a voucher or a purchasing card) (managed by the ministry of welfare or by the social departments of municipalities or regions).

The table below is an overview of the type of measures to support vulnerable consumers in each ASSIST country. It is interesting to note that similar measures are already in use in ASSIST countries, such as the discount on the energy bill or support to poor people to buy primary goods.

It is worth underlining that also the accessing mechanisms for these measures is the same and is based on income criteria excluding access to these financial measures to those consumers which do not satisfy such economic criteria (including those who have no income and own nothing). For the gas bonus, in the countries where it applies, the accessing criteria is always related to income however it excludes all consumers who are not connected to the gas network.

In Finland, where there are no specific measures for energy poverty, the basic welfare guarantees that a certain amount is payed each month by Kela to cover basic needs, but it is not voucher/purchasing card instead it is a direct cash payment payed to persons bank account. The Basic welfare benefit is just one of the social security benefits in Finland. Finland has one of the most extensive welfare systems, designed to guarantee adequate living conditions. The social security system is very complex and comprehensive. It includes i.e. social security benefits, such as the national pension, child benefit, basic unemployment security, sickness and disability benefits, child allowance, income support and guaranteed

minimum pension. The Scope of these measures is wide, yearly around 15 % of people in Finland receive housing allowance alone and around 7 % receive basic welfare.

The fact that the accession criteria for a discount on the energy bill is related to the household income also highlights the fact that a definition for energy poverty does not exist in most countries.

Table 1 Existing financial measures

	Discount on electric bill		Discount on gas bill		Financial support for energy		Take up of energy efficient measures		Purchasing card for primary goods (welfare social system) /	Others
	Energy poverty	General	Energy poverty	General	Energy poverty	General	Energy poverty	General		
Italy		X <sup>IC</sup>		X <sup>IC</sup>			X* **	X* **	X	Yes
Spain		X <sup>IC</sup>			X*	X*	X*	X	X*	
UK		X <sup>IC</sup>		X <sup>IC</sup>	X	X <sup>IC</sup>	X	X		Yes
Poland					X	X*	X* **	X	X	Yes
Belgium	X <sup>PC</sup>		X <sup>PC</sup>		X <sup>PC</sup>		X <sup>PC</sup>	X		
Finland						X			X <sup>SS</sup>	Yes

\* Regional measure

\*\* Not stable on the long run

IC Income Criteria

PC Protected Consumers - For Belgium protected consumers are people who are entitled to the social maximum prices for energy. (electricity and natural gas) – for further explanation refer to the link <http://www.energiesparen.be/sociaal/beschermd/wie>

SS Social System - monthly cash payments

### 3.2.2 Existing Financial measures

The table below reports as an example the existing national financial measures which have been inserted in the database (the title of the financial measures are hyperlink which access directly to the form on the database).

**Table 2 Examples of existing financial measures in the database for consumers**

Country (Region)	Financial Measure Title	Description
Belgium Flanders	- <a href="#">Dak- of zoldervloerisolatie (doe het zelf) Roof or attic floor insulation (do it yourself)</a>	Roof or attic floor insulation. (do it yourself) The premium is only valid for existing dwellings, housing units or buildings connected to the electricity grid before 1/1/2006 or an urban planning permit for this date. Only for roof or attic floor insulation not for both.
Belgium Flanders	- <a href="#">Roof or attic floor insulation (by contractor)</a>	The premium is only for existing home, housing unit or building connected to the electricity network for 1/1/2006 or an urban planning permit for this date. Only valid for roof or attic floor insulation, not for both. Only insulation of directly or indirectly heated rooms are eligible.
Belgium Flanders	- <a href="#">Nieuwe beglazing met een Ug-waarde van maximaal 1,1 W/m²K (New glazing with a Ug value of up to 1.1 W / m²K)</a>	New glazing with a Ug value of up to 1.1 W / m²K. With a maximum of 40% of the invoice. 10 euros / m² 56 euros / m² for protected customers
Belgium Flanders	-	Exterior wall insulation Customer / protected customer

	<a href="#">Buitenmuurisolatie (Exterior wall insulation)</a>	<p>Cavity wall 6 euros / m<sup>2</sup> / 9 euros / m<sup>2</sup></p> <p>Internal insulation exterior wall 15 euros / m<sup>2</sup> / 22.5 euros / m<sup>2</sup></p> <p>Exterior insulation exterior wall 15 euros / m<sup>2</sup> / 22.5 euros / m<sup>2</sup></p>
Belgium Flanders	- <a href="#">Warmtepomp (Heat pump)</a>	<p>Depending on the type:</p> <p>Customer / protected customer</p> <p>Geothermal heat pump 4000 euros / 4800 euros</p> <p>Air-water heat pump 1500 euros / 1800 euros</p> <p>Hybrid air-water heat pump 800 euros / 960 euros</p> <p>Air-air heat pump 300 euros / 360 euros</p> <p>Not for active cooling.</p> <p>Possible double premium if switching from electric heating or no connection to the natural gas network possible.</p>
Belgium Flanders	- <a href="#">Zonneboiler (Solar water heater)</a>	<p>Solar water heater installed by contractor max. 2750 euros and max. 40% of the invoice.</p> <p>550 euro / m<sup>2</sup> area of the app.</p> <p>For protected customers max. 3300 euro and max. 48% of the invoice.</p> <p>660 euro / m<sup>2</sup> of appurtenance area.</p>
Belgium Flanders	- <a href="#">Individuele condensatieketel op aardgas, propaan of stookolie (Individual condensing boiler on natural gas, propane or fuel oil)</a>	<p>Individual condensing boiler on natural gas, propane or fuel oil only for protected customers.</p> <p>Up to 1800 euros placed by contractor with a maximum of 40% of the invoice.</p>



Belgium Flanders	- <a href="#">Sociale energie-efficiëntie-projecten - SEEP (Social energy efficiency projects - SEEP)</a>	Social energy efficiency projects Cavity wall insulation 12 euros / m <sup>2</sup> New insulating glazing 85 euros / m <sup>2</sup> Roof insulation 20 euros / m <sup>2</sup> Only for specific target group mentioned on the form.
Belgium Flanders	- <a href="#">Vlaamse energielening (Flemish energy loan)</a>	Energy loan for energy saving measures. 15,000 euros to borrow over a period of 10 years at 0% for certain target group.
Belgium Flanders	- <a href="#">Renovatiepremie (Renovation bonus)</a>	Renovation bonus. 4 different category Incentive is 20% of invoice with maximum 2500 euro/category. Minimum investment/category is 2500 euro.
Belgium Flanders	- <a href="#">Vlaamse verbeteringspremie (Vlamsch improvement bonus)</a>	Vlamsch improvement bonus for houses older than 25 years.
Belgium Flanders	- <a href="#">Vloer- of kelderplafond isolatie (Floor insulation)</a>	Floor- or cellar insulation 6 euro/m <sup>2</sup> 9 euro/m <sup>2</sup> for protected client.
Belgium Flanders	- <a href="#">Total renovatiebonus Beno-pass (Total renovation bonus)</a>	Total renovation bonus for buildings. Client / protected clients Three investments 1250 euro / 1875 euro Four investments +500 euro / +750 euro

		Five investments +1000 euro / +1500 euro Six investments +1000 euro / +1500 euro Seven investments +1000 euro / +1500 euro
Belgium Flanders	– <a href="#">Lening woningfonds Vlaams (Loan Vlamisch house fund)</a>	Loan Flemish house fund. Loan for getting a house or apartment Or for working on a house or apartment Interest is 2%
Finland	<a href="#">Korjausavustus (Repair Allowance)</a>	The Repair allowance for the elderly and disabled is granted by the Housing Financing and Development Center (ARA). The Allowance may be granted for the repair of a dwelling where at least one of the residents is over 65 years old or disabled to enable them to remain living in the residence. Allowance can in some cases be used to energy efficiency repairs.
Finland	<a href="#">Perustoimeentulotuki (Basic Social Assistance)</a>	Basic social assistance is a last-resort financial assistance intended to cover the essential costs of daily living such as food, clothing or housing of a person who cannot afford them and is not entitled to any other assistance or they are not sufficient to cover a minimum.
Finland	<a href="#">Asumistuki (Housing allowance)</a>	A low-income household can receive general housing allowance to reduce housing costs. Housing allowance is granted jointly to the entire household.
Finland	<a href="#">Kotitalousvähennys (The household tax deduction)</a>	A household tax deduction is available for is available for the labour costs incurred in wide variety of work done for a household, including renovation and repair work, cleaning services and domestic help.
Finland	<a href="#">Sosiaalinen luototus (Social credit)</a>	Affordable loan for the necessary expenses or the payment of invoices and debts, granted for small-income but solvent persons. It is offered in around thirty municipalities in different parts of Finland.

Italy	<a href="#">Bonus elettrico</a>	<p>The “Bonus elettrico” constitutes a discount on the energy bill according. Consumers are entitled to the discount if their ISEE (economic indicator) is below 8.107,5 euro (in case of less than 3 children) or less than 20.000 if the family has 3 or more children.</p> <p>The amount of the discount for 2017 were:</p> <p>€ 112· Families with 1 or 2 components</p> <p>€ 137 Families with 3 or 4 components</p> <p>€ 165· Families with more than</p> <p>In case of families with disabled people or with specific medical needs, the electric bonus may exceed the imports reported above.</p>
Italy	<a href="#">Bonus gas</a>	<p>The “Bonus gas” has a mechanism similar to the “Bonus Elettrico”, it is a discount on the gas bill, the amount of the discount depends on the amount of the ISEE of the family.</p>
Italy	<a href="#">REI - Reddito d'Inclusione</a>	<p>The REI is an economic bonus provided to the poor families through a purchasing card (carta d'acquisto) charged every months with an import which depends on the number of the members of the families:</p> <p>1 member: 80 €</p> <p>2 members: 160 €</p> <p>3 members: 240 €</p> <p>4 members: 320 €</p> <p>5 o more members: 400 €</p> <p>To access the economic bonus the family must undertake a "social project" which has to start at the end of the second month after the submission of the request"</p>
Italy	Bon de Chauffage (2017) – Valle d'Aosta (Deadline 15/11/2017)	<p>Financial support for heating costs. The amount of the contribution is defined on the basis of the ISEE declaration, the energy requirements of the buildings, the altitude and solar exposure of the different thermal areas in which the territory is divided.</p>

Italy	Bando per la concessione di mutui per interventi nel settore dell'edilizia residenziale (2017) – Valle d'Aosta (Deadline 31/12/2017)	Mortgage grant to private individuals for building and plant transformation costs that result in an improvement in energy efficiency. The loan amount cannot be less than 5,000 euros. The annual interest rate applied is fixed at 1%.
Italy (Lombardia)	Bando accumulo (2017) (Deadline 28/09/2017)	Incentive measures for the diffusion of electricity storage systems from photovoltaic systems. Non-refund incentive for the purchase and installation of storage systems from photovoltaic systems, aimed only at private residents, with a variable amount up to 50% of the expenses incurred, for a maximum of 3,000 euro. The contribution can be combined with other possible benefits, for up to 100% of the amount of eligible expenses.
Italy (Trentino Alto Adige)	<a href="#">Impianti di teleriscaldamento provincia autonoma di bolzano</a>	The Autonomous Province of Bolzano promotes the rational use of energy, energy saving and the use of renewable energy sources. For the construction of a district heating plant, a contribution of up to 30% of the allowed expenditure is granted. A district heating system means a plant that supplies heat to locations or parts of demarcated locations or to at least 10 different buildings.
Italy - Provincia Autonoma Bolzano/Bozen	<a href="#">Sostituzione di finestre e portefinestre in edifici posti sotto tutela degli insiemi per i quali e' previsto, quale misura di salvaguardia, il divieto di demolizione</a>	The Autonomous Province of Bolzano promotes the rational use of energy, energy saving and the use of renewable energy sources. For the replacement of windows in buildings under group protection, a contribution of up to 30% of the allowed expenditure is granted.
Italy - Provincia autonoma di Bolzano	<a href="#">Coibentazione di tetti, solai sottotetto e terrazze non praticabili</a>	The Autonomous Province of Bolzano promotes the rational use of energy, energy saving and the use of renewable energy sources. For roof insulation, a contribution of up to 30% of the allowed expenditure is granted.
Italy - Provincia autonoma di Bolzano	<a href="#">Installazione di pompe di calore geotermiche</a>	The Autonomous Province of Bolzano promotes the rational use of energy, energy saving and the use of renewable energy sources. For the installation of geothermal heat pumps, a contribution of up to 30% of the allowed expenditure is granted.

Italy - Provincia autonoma di Bolzano	<a href="#"><u>Installazione di impianti solari termici per riscaldamento e/o raffreddamento</u></a>	The Autonomous Province of Bolzano promotes the rational use of energy, energy saving and the use of renewable energy sources. For the installation of solar heating systems for heating and / or cooling, a contribution of up to 30% of the allowed expenditure is granted.
Italy - Provincia autonoma di Bolzano	<a href="#"><u>Interventi di sensibilizzazione</u></a>	The Autonomous Province of Bolzano promotes initiatives to disseminate knowledge of technology related to the use of renewable energy sources and energy savings in general. Initiatives should not be used for advertising purposes (both personal advertising and product advertising), but should address a broad audience with objective and real information.
Italy - Provincia autonoma di Bolzano	<a href="#"><u>Studi di fattibilit� tecnico-economica</u></a>	The Autonomous Province of Bolzano promotes the rational use of energy, energy saving and the use of renewable energy sources. For technical-economic feasibility studies, a contribution of up to 30% of the allowed expenditure is granted.
Italy (Trentino Alto Adige)	<a href="#"><u>Risanamento energetico di singole unit� immobiliari Bolzano</u></a>	Contributions for energy efficiency and use of renewable energy sources. The intervention must be carried out in the Province of Bolzano. The contribution cannot be combined with contributions or facilitations provided for by the state legislation, other provincial laws or other laws charged to the provincial budget.
Italy (Lazio)	<a href="#"><u>Bando per la riduzione delle emissioni inquinanti delle caldaie a biomassa legnosa (2017)</u></a>	Subsidy for the replacement of old wood-fired biomass heat generators or the installation of electrofilters to reduce emissions of fine particles. The grant consists of a non-repayable grant to the extent of 60% of the eligible expenses (� 10,000 for replacement, � 2,000 for the installation of electrofilters).
Italy (Friuli-Venezia-Giulia)	<a href="#"><u>Contributo regionale per l'edilizia agevolata</u></a>	The incentive is a measure in favor of private citizens, who implement the purchase with recovery or recovery of the first house. With a minimum cost of 20,000 euros for extraordinary maintenance or energy efficiency measures, a contribution of 10,000 euros is obtained; with a minimum cost of 30,000 euros for purchase with recovery, renovations, restoration and conservative rehabilitation, a contribution of between 13,000 and 15,000 euros is obtained. Higher contributions are foreseen for initiatives carried out in entirely mountain municipalities and for applicants who find themselves in particular economic and social situations (increase of the contribution of 2,500 euros).

Poland	<a href="#">Energy Supplement</a>	Brief description on the funding (to describe what has been selected in the drop down menu, “financial instrument, “financeable action”, “type of funding”) in an easy language for the consumer.
Poland	<a href="#">Housing allowance</a>	The housing allowance is a subsidy paid to the poorest occupants that helps them to cover their monthly accomodation-related expenses ( like rent, energy bills).
Poland	<a href="#">EKO-DOM</a>	EKO-DOM is a local initiative aimed at improving air quality by reducing heat demand - themomodernisation of the buildings
Poland	<a href="#">OZE</a>	OZE is a local initiative aimed at improving air quality by implementation of Renewable Energy Sources.
Poland	<a href="#">Targeted subsidy</a>	The beneficiary may apply for a targeted subsidy for upgrading the boiler and to connect a DHW line from the municipal heating system, installing renewable energy sources
Poland	<a href="#">Thermo-modernisation bonus</a>	Thermo-modernisation bonus is a public support scheme which aims at increasing building energy efficiency. It is awarded by the Bank Gospodarstwa Krajowego (BGK) bank as a part of the Thermo-modernisation and renovation fund (FTiR).
Poland	<a href="#">Local Shelter Programme</a>	Local Shelter Programme is a local initiative aimed at helping residents who suffered a constant increase of heating costs connected with switching from solid fuel heat source to a more eco-friendly one.
Poland	<a href="#">Boiler Modernisation programme</a>	Boiler Modernisation Programme is a local initiative aimed at reducing local low emissions by subsidizing residents to switch from coal-fired boilers to other energy sources
Poland	<a href="#">Boiler Exchange</a>	"Boiler Exchange" is a programme aiming at lowering the air pollution by exchanging the old solid-fuel fired heat sources with newer ones by providing loans to the residents.
Poland	<a href="#">Special purpose allowance</a>	Special purpose allowance is a possible form of social assistance awarded to the poorest residents by municipalities

Spain	<a href="#"><u>Bono Socia (Social Tariff)</u></a>	The Social Tariff is a mechanism created by the national government for protecting vulnerable consumers and consists of a straight discount of 25% in their electricity bills for vulnerable consumers and 40% for severely vulnerable consumers (both with limits on the kWh consumption per year).
Spain (local Barcellona)	<a href="#"><u>Home Retrofit for People in Vulnerable Situation in Barcelona</u></a>	The Home Retrofit Program for People in a Vulnerable Situation is a subsidy scheme run and funded by the Barcelona City Government which aims to provide a minimum of living, safety, accessibility, hygiene and energy efficiency conditions.
Spain (various regions)	<a href="#"><u>Local Financial Support for Vulnerable Consumers (Ayudas de Urgencia Social)</u></a>	In Spain, the different regional and local manage emergency payments to tackle general poverty issues, and within them energy poverty..
Spain (local Zaragoza)	<a href="#"><u>Financial support in form of subsidy offered by Zaragoza housing consortium (Line II)</u></a>	Financial support in form of subsidy offered by Zaragoza housing consortium (Line II), available for improving the economic viability of innovative retrofit, for improving accessibility and energy efficiency of buildings, where families with economic and/or social vulnerability live.
Spain (local Zaragoza)	<a href="#"><u>Financial support in form of subsidy offered by Zaragoza housing consortium (Line III)</u></a>	Financial support in form of subsidy offered by Zaragoza housing consortium for addressing serious issues of housing conservation, energy poverty and/or accessibility within vulnerable groups.
United Kingdom	<a href="#"><u>Cold Weather Payments</u></a>	Cold weather payments of £25 a week are made to eligible households in an area where a period of 'exceptionally cold weather' has occurred.
United Kingdom	<a href="#"><u>Energy Company Obligation (ECO)</u></a>	The Energy Company Obligation (ECO) is a government energy efficiency scheme, funded by larger energy suppliers, to help reduce carbon emissions and tackle fuel poverty.

United Kingdom	<a href="#">Winter Fuel Payment</a>	A Winter Fuel Payment is an annual payment of between £100 and £300 to help people with the costs of keeping warm in the winter.
United Kingdom	<a href="#">Renewable Heat Incentive (RHI)</a>	The Domestic Renewable Heat Incentive (Domestic RHI) is a government financial incentive to promote the use of renewable heat. Eligible heating types include biomass boilers, ground/air source heat pumps and solar thermal.
United Kingdom	<a href="#">Feed in Tariff FiT</a>	A government scheme to support renewable technologies including Solar PV, wind, hydro, Anaerobic digestion and Micro combined heat & power.
United Kingdom	<a href="#">Charis Grants</a>	The larger energy suppliers provide additional support for some of their most vulnerable customers to clear gas and electricity debts owed and to purchase energy efficient appliances
UK - East Wales	<a href="#">Caerphilly Home Repair Grant</a>	This grant assistance is available to owner-occupiers and tenants with a repairing obligation for essential maintenance and repairs deemed necessary by the council.
UK - East Wales	<a href="#">Healthy Homes</a>	The aim of this project is to maintain and improve people's health by helping to make their homes warmer, drier, and more affordable to run.
UK - West Wales and The Valleys	<a href="#">Houseproud</a>	Houseproud is a free project management service in Denbighshire, to help homeowners aged 55 or over get any sort of repairs, adaptations or improvements on their home.
UK - West Wales and The Valleys	<a href="#">Heat and Save Scheme - Pontypridd</a>	The Heat and Save scheme is currently offering free heating control upgrades and insulation to eligible clients in Pontypridd.
UK - West Wales and The Valleys	<a href="#">HouseProud Wrexham</a>	Houseproud is designed to encourage owner / occupiers to take more responsibility for the improvements to their homes. It enables owners to have home improvements undertaken utilising either their own finance or through a loan. The scheme is administered by Wrexham Council in partnership with The Home Improvement Trust



---

UK - West [Care & Repair](#)  
Wales and The  
Valleys

---

Care & Repair exists across Wales to help older people to repair, adapt and maintain their homes thereby enabling them to live as independently as possible with increased safety, security, warmth and comfort

## 3.3 The “best” financial measures to tackle energy poverty in each country

### 3.3.1 Overview of existing financial measures

As highlighted in the previous paragraphs, Members States involved in ASSIST have implemented different financial measures to tackle energy poverty. It is interesting to notice how the financial measures vary both quantitatively and qualitatively between the countries. Analysing the existing financial measures the following conclusions can be stated:

- **Energy poverty versus Vulnerability versus Poverty** – in some countries there is no clear distinction between financial measures addressing energy poverty with respect to vulnerability and / or poverty. Countries have a clear and definite social financial frame with measures to tackle poverty by supporting poor citizens and citizens at risk of poverty while the measures to address energy poverty as a self-standing issue are general with the aim to provide economic support to afford the energy bill and the social welfare system is used to both identify recipients of support and distribute payments.
- **Energy poverty versus Fuel poverty** – in some countries there are specific measures for fuel poverty (where the definition of fuel poverty is not being able to afford heating or cooling the dwellings to reach comfortable temperatures) which provide support to consumers for their energy bills. Fuel poverty could also include energy expenditure for mobility, like in the case of Finland which is characterised by a low density of population and long distances between communities and where transportation is often a necessity in everyday life (for example in Finland, the basic social welfare is meant to cover local public transportation costs, the long term ill and disabled people can get a taxi card service to enable them to go to necessary appointments and the unemployed can get transportation subsidy if they get a job that is located far and need to commute over 3 hours daily in order to work).
- **Energy poverty versus energy efficiency** – in most countries there are incentives for take-up of energy efficient measures particularly those focusing on building retrofit. Energy efficiency is widely considered as a key strategy to tackle energy poverty, however very rarely the existing financial measures for energy efficiency are related or proportional to the degree of energy poverty of the household.

It can be stated that in general there is a correlation between existing national financial measures and the formal acknowledgement of energy poverty in the country.

- In countries where **energy poverty is recognised and formal definitions for energy poor and / or vulnerable consumers** have been adopted - such as in UK or in Belgium, specific financial framework has been built and implemented to properly address energy poverty (supporting both energy poor consumers as well as those at risk of energy poverty). In these countries there are in fact numerous financial

measures specifically addressing different aspects of energy poverty– such as the warm & well financial scheme in UK

- In countries where energy poverty is recognised as a social problem but no formal definitions are provided (such as Italy, Spain, Poland) or in countries where energy poverty as such is not distinguish from poverty ( as Finland), no specific schemes to support energy poor consumers have been implemented. In these countries the existing financial measures are related to the social dimension, considering energy poverty as a subset of poverty. In fact in these countries there are discounts on energy bill (electricity or gas) however the eligibility criteria to apply for such support is based on the household income.

It can be stated that the better energy poverty is formally recognised and defined as a specific issue (not related to the social dimension of poverty or to the mere difficulty of paying the energy bill) the better and more specific the financial frame to tackle energy poverty can be built. It is therefore important that Member States recognise and address energy poverty as a problem and implement measures to:

- Ensure basic energy services to all consumers,
- Protect the most vulnerable consumers,
- Prevent consumers falling into energy poverty.

It must however be underlined that financial measures are crucial for tackling energy poverty in the short term (be it affordability, energy efficiency) but are not sufficient and should be complemented with measures that address the underlying structural issues of energy poverty (such as improving energy efficiency of social housing, defining the responsibilities of house owners, simplifying the energy bills and increasing awareness on the relation between household habits and behaviours and energy consumption).

Building on the results of mapping and analysing the existing financial measures in ASSIST countries, some “best” financial measures can be identified and sharing the “best” existing financial measures can trigger the design and implementation in all countries of appropriate measures to tackle energy poverty. The support of all institutional European and National stakeholders is also sought for to play a strong role in information dissemination regarding effective and relevant measures.

### **3.3.2 ASSIST “Best” financial measures**

#### **3.3.2.1 Ex-post evaluation of state aids for environmental protection and energy**

The “COMMUNICATION FROM THE COMMISSION - Guidelines on State aid for environmental protection and energy 2014-2020 (2014/C 200/01)”, applies to State aid granted for environmental protection or energy objectives in all sectors governed by the Treaty and define the compatibility assessment, evaluation, application, reporting and monitoring and revision of the state aids for environmental protection and energy.

The communication reports that “state aid for environmental protection and energy objectives will be considered compatible with the internal market within the meaning of Article 107(3)(c) of the Treaty if, on the basis of the **common assessment principles** .. it leads to an increased contribution to the Union environmental or energy objectives without adversely affecting trading conditions to an extent contrary to the common interest. ...” (Art. 3.23). The Commission will consider a State aid measure compatible with the internal market only if it satisfies each of the following criteria:

- (a) contribution to a well-defined objective of common interest: a State aid measure aims at an objective of common interest in accordance with Article 107(3) of the Treaty;
- (b) need for State intervention: the State aid measure is targeted towards a situation where aid can bring about a material improvement that the market alone cannot deliver, for example by remedying a well-defined market failure;
- (c) appropriateness of the aid measure: the proposed aid measure is an appropriate policy instrument to address the objective of common interest;
- (d) incentive effect: the aid changes the behaviour of the undertaking(s) concerned in such a way that it engages in additional activity which it would not carry out without the aid or which it would carry out in a restricted or different manner;
- (e) proportionality of the aid (aid kept to the minimum): the aid amount is limited to the minimum needed to incentivise the additional investment or activity in the area concerned;
- (f) avoidance of undue negative effects on competition and trade between Member States: the negative effects of aid are sufficiently limited, so that the overall balance of the measure is positive;
- (g) transparency of aid: Member States, the Commission, economic operators, and the public, have easy access to all relevant acts and to pertinent information about the aid awarded thereunder;

Further to the above mentioned assessment principles, the communication reports also the **General Compatibility Provisions**. The General conditions are the following:

- The general objective of environmental aid is to increase the level of environmental protection compared to the level that would be achieved in the absence of the aid. The Europe 2020 strategy in particular set targets and objectives for sustainable growth to support the shift towards a resource-efficient, competitive low-carbon economy. A low carbon economy with a significant share of variable energy from renewable sources requires an adjustment of the energy system and in particular considerable investments in energy networks (36). The primary objective of aid in the energy sector is to ensure a competitive, sustainable and secure energy system in a well-functioning Union energy market (37).
- Member States intending to grant environmental or energy aid will have to define precisely the objective pursued and explain what is the expected contribution of the measure towards this objective. When introducing a measure co-financed by the European Structural and Investments Funds, Member States may rely on the

reasoning in the relevant Operational Programmes in indicating the environmental or energy objectives pursued.

- Environmental studies can contribute to achieving a common objective when they are directly linked to investments eligible under these Guidelines, also if following the findings of a preparatory study, the investment under investigation is not undertaken.

To demonstrate the contribution of an individually notifiable aid towards an increased level of environmental protection, the **Member State may use, as much as possible in quantifiable terms, a variety of indicators**, in particular the ones mentioned below:

- (a) **abatement technologies**: the amount of greenhouse gases or pollutants that are permanently not emitted in the atmosphere (resulting in reduced input from fossil fuels);
- (b) **existing Union standards**: the absolute amount and relative size of the increase in the level of environmental protection over and above the standard, that is to say a reduction of pollution that would not be achieved by the standard in the absence of any State aid;
- (c) **future Union standards**: the increase in the rate at which future standards are implemented, that is to say a reduction of pollution starting at an earlier date.

According to the guidelines, to define and implement the state aids, member States have assessed whether the State aid is effective to achieve the objective, by diagnosing and defining the problem that needs to be addressed. Further Member States have identified the market failures hampering an increased level of environmental protection or a well-functioning secure, affordable and sustainable internal energy market. Market failures related to environmental and energy objectives may be different or similar, but can prevent the optimal outcome and can lead to an inefficient outcome for the following reasons:

- (a) Negative externalities: they are most common for environmental aid measures and arise when pollution is not adequately priced, that is to say, the firm in question does not face the full cost of pollution. In this case, undertakings acting in their own interest may have insufficient incentives to take the negative externalities arising from production into account either when they decide on a particular production technology or when they decide on the production level. In other words, the production costs that are borne by the undertaking are lower than the costs borne by society. Therefore undertakings typically have insufficient incentive to reduce their level of pollution or to take individual measures to protect the environment.
- (b) Positive externalities: the fact that part of the benefit from an investment will accrue to market participants other than the investor, will lead undertakings to underinvest. Positive externalities may occur for instance in case of investments in eco-innovation (39), system stability, new and innovative renewable technologies and innovative demand-response measures or in case of energy infrastructures or generation adequacy measures that benefit many Member States (or a wider number of consumers).
- (c) Asymmetric information: this typically arises in markets where there is a discrepancy between the information available to one side of the market and the information

available to the other side of the market. This could for instance occur where external financial investors have a lack of information about the likely returns and risks of the project. It may also come up in cross-border infrastructure collaboration where one party has an information disadvantage compared to the other party. Although risk or uncertainty do not in themselves lead to the presence of a market failure, the problem of asymmetric information is linked to the degree of such risk and uncertainty. Both tend to be higher for environmental investments with a typically longer amortisation period. It might reinforce a focus on a short-term horizon that could be aggravated by financing conditions for such investments in particular for SMEs.

- (d) Coordination failures: they may prevent the development of a project or its effective design due to diverging interests and incentives among investors, so called split incentives, the costs of contracting, uncertainty about the collaborative outcome and network effects, for example e.g. uninterrupted supply of electricity. They can arise for example in the relationship between a building owner and a tenant in respect of applying energy efficient solutions. Coordination problems may be further exacerbated by information problems, in particular those related to asymmetric information. Coordination problems may also stem from the need to reach a certain critical mass before it is commercially attractive to start a project which may be a particularly relevant aspect in (cross-border) infrastructure projects.

In the guidelines the commission has also set the procedure to be followed for certain categories of schemes which may be further subject to a requirement of ex post evaluation. Given the objectives of the ex-post evaluation, and in order not to put disproportionate burden on Member States and on smaller aid projects, such evaluation only applies for aid schemes with large aid budgets, containing novel characteristics or when significant market, technology or regulatory changes are foreseen. The ex-post evaluation must be carried out by an expert independent from the aid granting authority on the basis of a common methodology provided by the Commission.

On the basis of the contents of the communication, an ex-post evaluation of the financial measures is possible only if:

- the analysis carried out of the ex-ante situation is known (diagnosis and definition of the problem that needs to be addressed and market failures hampering an increased level of environmental protection or a well-functioning secure, affordable and sustainable internal energy market and for the market failures which are the factors that have led to inefficient outcome).
- The data on the financial measure implementation such as.
  1. initial amount of funding available and the amount used per defined timeframes,
  2. total number of eligible consumers / households and number of consumers / households who requested the financial support per defined timeframes,
  3. total number of financial support requests received and total number of eligible ones (and eligibility criteria non satisfied for the non eligible requests),

4. average time needed to file the request and consideration of worthiness on behalf of the consumers in terms of time,
5. average amount of financial support received and consideration of worthiness on behalf of the consumers in terms of time,
6. etc.

As an example of an interim evaluation, the “In depth Interim Evaluation of Horizon 2020 [SWD(2017) 221 final] [SWD(2017) 222 final] has been analysed. For the purpose of the evaluation, the intervention logic of Horizon2020 was reconstructed and is reported in the following picture. It describes the links between the problems to be tackled, the objectives to be achieved, the activities and the expected impacts. It distinguished between outputs (the direct products from the actions, such as reports, trained researchers, demonstrators, prototypes, new infrastructures), results (that relate to benefits for direct beneficiaries from their participation) and impacts (the wider effects of Horizon 2020, which are categorised into three main categories: scientific impact, innovation / economic impact and societal impact. The analysis of progress performed for this interim evaluation is made according to these main strands of impacts based on information available so far.



**NEEDS**

- Insufficient contribution of R&D to tackling societal challenges
- Insufficient technological leadership and innovation capability of firms
- Need to strengthen the science base
- Insufficient cross-border coordination

**OVERALL OBJECTIVE OF HORIZON 2020**

Contribute to building a society and an economy based on knowledge and innovation across the Union by leveraging additional R&D&I funding and by contributing to achieving R&I targets, including the target of 3 % of GDP for R&D across the Union by 2020. It shall thereby support the implementation of the Europe 2020 strategy and other Union policies, as well as the implementation and functioning of the European Research Area (ERA).

**ERA priorities**

- More effective national research systems
- Optimal international co-operation and competition
- An open labour market for researchers
- Gender equality and gender mainstreaming in research
- Optimal circulation and transfer of scientific knowledge

**Contribution to Europe 2020 Strategy**

- Smart, sustainable and inclusive growth

**Contribution to EC priorities**

- Jobs, growth and investment
- An energy union with a low-carbon, resilient, secure and sustainable energy system
- A stronger global actor
- The evolution of a digital internal market

**INPUTS**

- Financial support to indirect actions: grants, prizes, procurement and financial instruments
- Financial support to direct actions undertaken by the JRC
- Financial costs incurred for expert groups, studies, events
- Programme management (IT, technical and administrative expertise provided by EC services, and for communication)

**ACTIVITIES**

- I Excellent Science (investigator driven)**  
Science-driven and largely bottom-up activities which are forward-looking, building skills in the long term, focusing on the best generation of science, technology, research and innovation and providing support for emerging talent from across the EU and associated countries, as well as worldwide.
- II Industrial Leadership (business driven)**  
Activities following a business- and SME-driven agenda, based on a demand-driven, bottom-up logic (SME instrument). Budgets supplemented by use of financial instruments.
- III Societal Challenges (top-down)**  
Society societal challenges cover:  
Activities covering from basic research to market, with a focus on innovation-oriented activities, such as piloting, demonstration activities, testbeds, support for public procurement, design, and user-driven innovation, social innovation, knowledge transfer and market take-up of innovations and standardisation.
- IV Spreading Excellence & Widening Participation**  
Learning, training, ERAClaim, Policy Support Facility, better access of researchers & innovators to transnational networks (support to COST, NCPs, synergies with other policies and programmes).
- V Science with and for Society**  
Attractiveness of scientific careers, gender equality, integration of citizens' interests and values in R&I, science education, accessibility and use of research results, performance for the advancement of responsible R&I and provision of an ethics framework for R&I, anticipation of potential environmental, health & safety impacts, and improved knowledge in science communication.
- Cross-cutting activities/Focus areas**
- Fast Track to Innovation (pilot)**  
Behaviour measure for close-to-market innovation activities
- Cross-cutting support to specific issues**  
Gender equality, responsible research and innovation, international cooperation, social sciences and humanities, SME participation, sustainable development, biodiversity and fight against climate change, Digital Agenda
- Non-nuclear direct actions of JRC**  
Provision of evidence for EU policies - driven by customer needs, coordinated by forward-looking activities
- European Institute of Innovation and Technology**  
Knowledge and Innovation Communities bringing together the European triangle

**EXPECTED OUTPUTS (By project's end (1-10 years))**

- Human capital development**  
Researchers trained (incl. PhD positions, graduate fellowships)  
Mobile researchers (career-builder and cross-sector)  
World-level researchers attracted to EU  
Educational networks and curricula for boosting R&I  
Provision of information on R&I jobs and training (incl. EURAXESS services)  
Established changes within research organisations to implement the European Research Area priorities  
Gender Equality Plans (GEPs) in RFP and H2020  
Gender dimension integrated in projects
- Research infrastructures**  
New research infrastructures built  
Better access to research infrastructures  
World-class research structures for raising research environments  
Creation of new (or upgrading of existing) Centres of Excellence in key R&I sectors (H2020 and EC)
- Partnerships & international openness**  
Scientific collaboration across disciplines on new, high-risk ideas (Crosscutting) (also knowledge) and cross-disciplinary research and innovation activities (incl. SMEs)  
Set-up of Knowledge and Innovation Communities gathering research, innovation and higher education  
Networks of developers, providers and users of solutions (multidisciplinary, cross-cutting)
- Outputs for knowledge transfer**  
Many results and reports  
Final publications  
Research data provided to open access  
Intellectual property (incl. patents)  
Data Management Plans (Data as Open Research data)  
Conferences, workshops, papers, and proceedings  
Policy networks  
Information material for user communities
- Early outputs for subsequent innovation**  
New, shared or improved research tools & techniques, models and strategies  
New advanced capabilities, methods, systems, infrastructures and technologies  
New, shared or improved ideas, products, designs, processes, services and business models
- Outputs for research or market integration**  
New scientific platforms, networks  
New common methodologies  
Technology roadmaps  
New or improved standards  
Implementation of solutions of R&I in non-researching sector
- Closer to market outputs**  
Proof of scientific & technological feasibility  
Advances in market and end-user needs  
Demonstrations of innovative solutions  
Business plans  
New, context-adapted solutions (technological & user-technology) e.g. financial, regulatory or business models  
Innovation processes, production, service delivery systems  
Feasible, viable and additional in following up - private, public, and - from non-researchers - a license
- Outputs for wider society**  
New or improved ethical standards or guidelines  
Science and innovation education raising activities (incl. science advice, science ethics, exhibitions)
- Policy outputs**  
Proof of scientific & technological feasibility  
New calls launched between national authorities  
Policy dialogues, mutual learning exercises (incl. exchange of best practices and studies) (incl. with local authorities)  
Strategic planning and implementation of policy- and programme-level strategic national level  
Strategic planning, networking and coordination between stakeholders in different countries  
Public procurement of research, development & validation of new solutions

**EXPECTED RESULTS (From projects' outputs + up to 5 years)**

- Strengthened R&I capacities/excellence**  
Established single market for researchers  
Improved attractiveness of researchers' careers across the EU  
Strengthened human potential in R&D in business and academia (incl. gender balance) across EU countries  
Regulation and excellence of Europe in scientific and technological research (modernisation of research institutions, quality of research output in basic & applied research)  
Increased awareness of potential of EU research infrastructures  
Scientific leadership spanning innovation across sectors  
Increased and consolidated evidence base about the cost-effectiveness, age-ability and market up-taking potential of the research solution
- Better R&I integration**  
Strategic pan-European collaboration across disciplines, sectors, value chains & technology  
Interconnected European data infrastructures  
Anecdotal open data sharing and use in Europe  
Improved science education for all citizens  
Improved scientific capabilities of existing countries to improve their chances to seek competitive funding in international flows
- Diffusion of innovation in products, services, processes**  
Availability of demonstrated replicable, up-scalable and "contested public" innovative solutions  
All forms of innovation that could be translated to new sustainable economic footprints and through digital system  
Improved market uptake and application of novel technologies  
Solutions brought closer to market (commercialisation in TRL)  
Improved cost-effectiveness and sustainability of solutions  
Improved manufacturing processes & automation of EU industry  
Improved basic research for European manufacturing and service providers  
Improved sustainability across the entire product-service lifecycle  
Increased digitalisation of industry and economy  
New or better product-service offerings addressing customer needs  
Creation of smart global value chains that enable value capture in Europe
- Jobs, growth & competitiveness of participants (incl. SMEs)**  
Improved innovation capabilities and competencies of European enterprises in global market for innovative solutions (esp. SMEs)  
New businesses created in business and academia  
New business entities created or improved performance of existing businesses  
Opening up of new markets for public goods  
Growth & internationalisation of participating SMEs
- Strengthened framework conditions for R&I**  
Leveraged private and public investment in R&I  
Leveraged demand for solutions for tackling societal challenges  
More innovation-innovative regulatory frameworks  
Innovative financing, business and governance models for innovation solutions adopting (non-disciplinary and participatory approaches and promoting scientists' engagement (co-creation processes)  
Increased credibility of public & private finance for R&D and innovation-driven companies
- Social and environmental outcomes**  
Improvement of social awareness, understanding and engagement to tackle societal challenges through R&I  
Better societal acceptance of innovative solutions  
Increased awareness of the new innovations among industry, research, user and policy communities  
Revised research integrity and ethics standards  
More effective promotion of gender equality and the gender dimension in research and innovation context  
Feasible R&I principles embedded in EU Higher Education  
Improved environmental performance (climate change, biodiversity, sustainability)  
Improved quality of life  
Reduced direct and indirect costs linked to societal issues  
Improved research and innovation culture in EU
- Innovation in policy-making**  
Better informed decision-making by stakeholders & companies at the EU and global levels  
Better alignment of policy of regional, national, EU and international R&I efforts  
More responsible research and innovation  
Better R&I policy-making cooperation (national R&I to Europe)
- International positioning**  
Enhanced position of the EU R&I in international R&I arena  
Increased international research cooperation and international R&I activities through science diplomacy  
Strengthened synergies with the EU's external policies and with the actions of Member States  
EU leading multilateral initiatives and working with international organisations to tackle global societal challenges

**CONTRIBUTION TO EXPECTED IMPACTS (From projects' outputs + up to 20 years)**

- Scientific impacts**  
EU world-class excellence in science  
Better cross-border & cross-sector coordination & integration of R&I efforts  
Emergence of new technologies or field of science in the EU
- Innovation/economic impacts**  
Better innovation capability of EU firms  
EU technological leadership & strengthened competitive position of European industry (incl. SMEs, start-ups)  
Diffusion of innovation in the economy (incl. in SMEs) generating jobs, growth and investments
- Societal impacts**  
Better contribution of R&I to tackling societal challenges  
Stronger global role of the EU, steering the international agenda to tackle global societal challenges  
Better societal acceptance of science and innovative solutions

**OTHER EU POLICIES**

- TFPI
- ESF Funds
- Common Agricultural Policy
- COGME
- Erasmus+ programme
- LIFE Programme
- Other EU thematic policies
- EU external and development policy

**EXTERNAL FACTORS**

- Socio-economic conditions affecting the sustainability of funding of EU, national, regional, local level (public and private)
- Volatility of prices of energy & raw materials
- MS policies: legislative and/or regulatory framework
- International agreements, in particular UN, 2030 Sustainable Development Goals



In line with the “Better Regulation” guidelines, the interim evaluation addresses evaluation questions under each of the sections which are structures around the five evaluation criteria of relevance, efficiency, effectiveness, coherence and EU added value

**Figure 3 Evaluation questions and sub-questions**

Main evaluation questions	Sub-questions per evaluation criteria
How relevant has Horizon 2020 been so far?	<ul style="list-style-type: none"> <li>➤ Is Horizon 2020 tackling the right issues?</li> <li>➤ Does Horizon 2020 allow adapting to new scientific and socio-economic developments?</li> <li>➤ Is Horizon 2020 responding to stakeholder needs?</li> </ul>
How efficient has Horizon 2020 been so far?	<ul style="list-style-type: none"> <li>➤ How efficient are the programme management structures?</li> <li>➤ How efficient are the communication and application processes?</li> <li>➤ How efficient is the distribution of funding?</li> <li>➤ To what extent is Horizon 2020 cost-effective?</li> </ul>
How effective has Horizon 2020 been so far?	<ul style="list-style-type: none"> <li>➤ What is the progress made towards achieving scientific impact? <ul style="list-style-type: none"> <li>- What is the progress made on strengthening R&amp;I capacities, reputation and scientific excellence?</li> <li>- What is the progress made on improving R&amp;I integration?</li> <li>- What is the contribution of Horizon 2020 to the achievement and functioning of the European Research Area</li> </ul> </li> <li>➤ What is the progress made towards achieving innovation and economic impact? <ul style="list-style-type: none"> <li>- What is the progress made on advancing knowledge, IPR and knowledge transfer?</li> <li>- What is the progress made on reinforcing framework conditions for R&amp;I?</li> <li>- What is the progress made on delivering close to market outputs and diffusing innovation in products, services and processes?</li> </ul> </li> <li>➤ What is the progress made towards achieving societal impact? <ul style="list-style-type: none"> <li>- What is the progress made on tackling societal challenges?</li> <li>- What is the progress made on generating science with and for society?</li> <li>- What is the progress made on generating science for policy?</li> </ul> </li> <li>➤ What is the overall progress of Horizon 2020 towards its general objective?</li> </ul>
How coherent has Horizon 2020 been so far?	<ul style="list-style-type: none"> <li>➤ To what extent is Horizon 2020 coherent internally?</li> <li>➤ To what extent is Horizon 2020 coherent with other EU initiatives, in particular the European Structural and Investment Funds (ESIF) and the European Fund for strategic Investment (EFSD)?</li> <li>➤ To what extent is Horizon 2020 coherent with other initiatives at national, regional and international level?</li> </ul>
What is the European added value of Horizon 2020 so far?	<ul style="list-style-type: none"> <li>➤ What is the European added value of Horizon 2020 compared to national and/or regional levels?</li> </ul>

### 3.3.3 Methodology for ASSIST “Best” financial measures identification

For the analysis of the existing financial measures to tackle energy poverty and the identification of the best practices, most of the data needed for such in an depth scientific econometric analysis is not available. ASSIST consortium has therefore opted for a more pragmatic approach for the identification of the “best” financial measures, combining and matching the formal data available for all financial measures on one side and consumer’s perception and use of the financial measures (collected through both ASSIST consumers’ survey and on desk research), the following criteria were identified to analyse the

“goodness” of the financial measure. Where the “goodness” is related to the use and usability of the financial measure from the consumer’s point of view.

The criteria identified and used in ASSIST to analyse the existing financial measures to tackle energy poverty are:

- **Eligibility with respect to energy poverty** – is the measure specifically targeting energy poor consumers. This criteria has been introduced to evaluate the relation and specificity of the financial measure to support consumers in energy poverty.
- **Scope of measures** – is the scope to provide financial support or does it have also a preventive impact especially targeting consumers at risk of energy poverty. This criteria has been introduced to evaluate the strategy of tackling energy poverty on the long run.
- **Impact of the measure to the most in need** – is the measure specific for consumers who are most in need. The criteria has been introduced to evaluate the relation and specificity of the financial measure to support consumers in poverty.
- **Stability of the financial measure** – is the measure occasional or has it been running for the past years and what are the chances of changes, discontinuity or interruptions of it. This criteria has been introduced to evaluate the use and usability on the long term of the financial measures. In fact, as energy poor consumers are usually characterised by a low level of literacy and education, the more the measure is a long term and stable the higher the possibility of it being used by energy poor consumers;
- **Availability of funding** – is the measure available for consumers in terms of time – for how much time is the financial measure open – and of budget - how much funding has been destined for the measure. This criteria has been introduced to evaluate the use and usability on the long term of the financial measures. Always considering energy poor consumers characterised by a low level of literacy and education, the wider the time length the measure is open and the higher the budget available, the higher the possibility of it being used by energy poor consumers;
- **Actual usage of the measure in terms of percentage out of the total of the eligible consumers** – is the measure actually used by the eligible consumers, what is the share of consumers requesting the financial support with respect to the total eligible number. This criteria has been introduced to evaluate the use and usability on the short term of the measure and to have indications on the ease of access to the financial support, the existence of bureaucratic barriers in the request filing process and consistency of the measure to the needs of energy poor consumers.
- **Financial support or fiscal bureaucracy** – is the support provided as direct financial support, including discount on energy bills, or is it related to the fiscal regime, such as tax reduction. This criteria has been introduced to evaluate the economic benefits of the measure, indirect monetary gain (in terms of less taxes) with respect to the direct money gain. In case of fiscal reduction the financial support is on the long term

and not being directly tangible may not be considered worthy by energy poor consumers.

- **Finance of the measure** – is the overall sum foreseen per household sufficient to implement energy efficient measures or the proportion of costs covered by the measure with respect to total cost bore worthy. This criteria has been introduced to evaluate the use and usability on the short and long run of financial measures for the take up of energy efficient measures
- **Installation and Post-installation support** – is the measure flexible and provides consumers with real and effective open choices in terms of energy efficient measures to take up or the professional to call and does it foresee a proper support also after installation. This criteria has been introduced to evaluate the use and usability on the short and long run of financial measures for the take up of energy efficient measures.
- **Guarantees** – are guarantees available and easily accessible in the case of installation. This criteria has been introduced to evaluate the use and usability on the short and long run of financial measures for the take up of energy efficient measures.

### 3.3.4 Identified “best” measures

In each country the existing measures have been analysed against the defined criteria and the present paragraph reports for each country the results of the “best” identified measures, summarised also in the following table

<b>Belgium</b>	Social rate for electricity and gas	Extra premium for energy-saving measures	Loan without interest for energy saving measures						
<b>Finland</b>	Housing Allowance	Basic social Assistance	Repair Allowance						
<b>Italy</b>	Bonus elettrico	Bonus gas	REI (Reddito di Inclusione)						
<b>Poland</b>	Wymiana pieców (Boiler exchange programme)	Housing Supplement (Dodatek Mieszkaniowy)	Lokalny Program Ośłonowy (Local Shelter Programme)	Dotacje celowe na finansowanie lub dofinansowanie inwestycji na terenie m.st. Warszawy, służących ochronie środowiska i gospodarce wodnej	Energy Supplement (Dodatek Energetyczny)	Zasiłek celowy (Special purpose allowance)	Ryczałt energetyczny Premia	termomodernizacyjna (Thermomodernisation bonus)	PONE - pożyczki dla osób fizycznych
<b>Spain</b>	Bono Social - Social Tariff	Home Retrofit for People in Vulnerable Situation in Barcelona	Ayudas de Urgencia Social (Local Financial Support for Vulnerable Consumers)	Financial support in form of subsidy offered by Zaragoza housing consortium					
<b>United Kingdom</b>	Energy Company Obligation (ECO) CERO/HHCRO/FLEX	Renewable Heat Incentive (RHI)	Winter Fuel Payment	Warm Homes Discount Scheme					

### 3.3.4.1 Belgium

#### Social rate for electricity and gas

Eligibility with respect to energy poverty – The social rate is not specifically targeted to those in energy poverty, but to protected consumers, connected to the grid.

Scope of measures – It is a discount on the energy bill. The price for 1 kWh is cheaper than with the commercial supplier of energy.

Impact of the measure to the most in need – It does address those most in need, as it addresses protected consumers.

Stability of the financial measure – It is stable since several years.

Availability of funding – There is no maximum amount of funding, depending on the amount of energy that you use.

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – It is automatically awarded since 2009. It involved about 8% of the total consumers.

Financial support or fiscal bureaucracy – Financial support, lower price for energy.

Finance of the measure – For every protected consumer the same cheaper price for energy.

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

#### Extra premium for energy-saving measures

Eligibility with respect to energy poverty – The extra premium is only for protected consumers, not necessarily in energy poverty.

Scope of measures – It is an extra premium for the protected consumers above the normal premium for everyone else.

Impact of the measure to the most in need – It does address those most in need, as it addresses protected consumers.

Stability of the financial measure – It is stable during a few years. But the amount can change every year.

Availability of funding – There is no maximum amount of funding.

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Not applicable

Financial support or fiscal bureaucracy – Extra premium for energy-saving measures

Finance of the measure – The value of the extra premium depends on the measure performed.

Installation and Post-installation support – Social renovation projects foresee in ample post-installation support

Guarantees – Not applicable

## **Loan without interest for energy saving measures**

Eligibility with respect to energy poverty – Only without interest for protected consumers.

Scope of measures – Loan without interest, max. 15000 euro. Payback time 8 years.

Impact of the measure to the most in need – Only for the one who most needed. You need to have one of the papers that confirm you have access to it.

Stability of the financial measure – Since several years with 0% for protected consumers.

Availability of funding – Loan maximum 15.000 euro for 8 years.

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
– Unknown

Financial support or fiscal bureaucracy – Financial support, loan.

Finance of the measure – Maximum 15000 euro, limited by the total cost of the energy-saving measures.

Installation and Post-installation support – not applicable

Guarantees – not applicable

### **3.3.4.2 Finland**

#### **Housing Allowance**

Eligibility with respect to energy poverty – Is not specifically targeted to those in energy poverty, but to low-income households.

Scope of measures —monthly cash payment to help low-income households by reducing housing cost

Impact of the measure to the most in need – It does address those most in need, as it addresses low-income households.

Stability of the financial measure – It is stable, the housing allowance is based on National Act on General Housing Allowance and Act on Pensioner's Housing Allowance.

Availability of funding – Funding not limited, available for all who are eligible In 2016, The Social Insurance institution of Finland (Kela) paid housing allowances for total of 1919 million euros, which is 11% more than in the previous year. In 2016 15,6% of population in Finland receive housing

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
–Not available. The aid is available for those in need but it is not automatically handed out but need applying.

Financial support or fiscal bureaucracy – Requires applying either online or at a Kela office. Application also requires providing data on assests, income and expenditure.

Finance of the measure – Allowance is 80% of the difference between the acceptable housing costs and the basic deductible. The amount of acceptable housing costs differs depending e.g. on the location of housing and household size. The amount of basic deductible is based on the person's income. Persons with very low incomes need pay no

basic deductible. If the amount of actual housing costs is smaller than of acceptable housing, the amount of the allowance will be calculated based on the actual costs.

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **Basic Social Assistance**

Eligibility with respect to energy poverty – Is not specifically targeted to those in energy poverty,

Scope of measures – monthly cash payment to a person, for covering the essential costs of daily living such as food, clothing or housing of a person who cannot afford them and is not entitled to any other assistance or they are not sufficient to cover a minimum.

Impact of the measure to the most in need – It does address those most in need, as it addresses low-income households. Stability of the financial measure – It is stable, Basic social welfare is based on national law: Act on social assistance

Availability of funding – Funding not limited, available for all who are eligible. In 2016 7,2 % of Finnish received basic welfare. The national expenditure on basic welfare in 2017 was 722 million euros.

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Not available. The aid is available for those in need but it is not automatically handed out but need applying

Financial support or fiscal bureaucracy – Requires applying either online or at a Kela office. Application also requires providing data on assets, income and expenditure.

Finance of the measure – The right to basic social assistance is determined by estimating, on the basis of the Social Assistance Act, the amount of assistance needed by the applicant and by calculating the applicant's income and expenditure. Income includes the after-tax income available to the applicant and his or her family and any assets that they have. Expenses are defined as the expenses covered by the basic amount and other essential basic expenses. If the recognised expenses are higher than the income, the difference between the expenses and income is paid to the applicant as social assistance. The basic amount of basic welfare was EUR 487.89 per month in 2017.

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **The Repair allowance**

Eligibility with respect to energy poverty – Is not specifically targeted to those in energy poverty, but to the elderly and disabled.

Scope of measures – The Repair allowance is a direct subsidy to help cover the costs of renovation done on a dwelling where at least one of the residents is over 65 years old or disabled to enable them to remain living in the residence. Allowance can in some cases be used to energy efficiency repairs.



Impact of the measure to the most in need – it does address the ones in need as it is targeted at elderly and disabled and given based on income criteria.

Stability of the financial measure – Quite stable, but cuts on equivalent subsidies for different target groups (such as Energitukia energy efficiency subsidy for households) have been made in recent years.

Availability of funding – not available

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – not available

Financial support or fiscal bureaucracy – Requires applying online via Ara site. Application also requires providing data on the renovation assests and income.

Finance of the measure – From the beginning of 2017, the repair allowance is up to 50% of the eligible repair costs. In exceptional cases, the allowance may be up to 70% if it is for a front veteran or a veteran's widow, or if the elderly or disabled person would otherwise have to be permanently removed from the residence due to restrictions of movement or because the health care services the person requires cannot be provided due to the conditions in the residence.

Installation and Post-installation support – No

Guarantees – No

### 3.3.4.3 Italy

#### **Bonus elettrico**

Eligibility with respect to energy poverty – The bonus is not specifically targeted to those in energy poverty, but to economically disadvantaged consumers connected to the grid. This could miss on hidden energy poor households.

Scope of measures – It is a discount on the energy bill: it is more directed to provide with a compensation than to prevent falling into energy poverty.

Impact of the measure to the most in need – It does address those most in need, as it addresses economically disadvantaged citizens (and to those with serious health conditions) whose annual income is within a specific threshold.

Stability of the financial measure – It is stable, it has been established through a national law in 2009 and since then it has been improved (and the mechanism is still under revision for further improvements). To cancel the bonus would require a repeal of law.

Availability of funding – There is no maximum amount of funding: the bonus could cover the entire population of eligible

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – The usage of the measure is quite low, equivalent to 34% of those entitled to it actually use it. The low percentage is triggering the revision of the accessing mechanism moving from a bottom-up requesting mechanism to a automatic one.

Financial support or fiscal bureaucracy – Discount on energy bill, no fiscal bureaucracy



Finance of the measure – The value of the bonus depends on the number of members of the family and it is updated every year by the Authority. For the year 2017, the annual bonus could reach the following amount: •1-2 members € 112

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **Bonus gas**

Eligibility with respect to energy poverty – The bonus is not specifically targeted to those in energy poverty, but to economically disadvantaged consumers connected to the grid. This could miss on hidden energy poor households.

Scope of measures – It is a discount on the energy bill: it is more directed to provide with a compensation than to prevent falling into energy poverty.

Impact of the measure to the most in need – It does address those most in need, as it addresses citizens whose annual income is within a specific threshold. Anyway, these measure could miss the specific target of hidden energy poor households, i.e. the ones not even able to afford a heating device. Another issue is that the gas bonus does not address consumers off the grid.

Stability of the financial measure – It is stable, it has been established through a national law in 2009 and since then it has been improved (and the mechanism is still under revision for further improvements). To cancel the bonus would require a repeal of law.

Availability of funding – There is no maximum amount of funding: the bonus could cover the entire population of eligible

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – The usage of the measure is quite low, equivalent to 27% of those entitled to it actually use it. The low percentage is triggering the revision of the accessing mechanism moving from a bottom-down requesting mechanism to a automatic one.

Financial support or fiscal bureaucracy – Discount on gas bill, no fiscal bureaucracy

Finance of the measure – The value of the bonus depends on the number of family members, climate zone and type of use of gas and it is updated every year by the Authority. For the year 2017, the annual bonus could reach the following amount: • up to 4 members: boiler + heating, max 184€;

• more than 4 members: max 266€

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **REI (Reddito di Inclusione) - previously SIA (Supporto Inclusione Attiva)**

Eligibility with respect to energy poverty – High - the target of people in need is well targeted through this mechanism being linked to several accessing conditions (not only the financial ones relative to the household incomes)

Scope of measures – The SIA is a economic bonus provided to the poor families through a purchasing card (carta d'acquisto) charged every months with an import which depends on the number of the members of the families:

1 member: 80 €

2 members: 160 €

3 members: 240 €

4 membri: 320 €

5 o more members: 400 €

To acces the economic bonus the family must undertake a "social project" which has to start at the end of the second month after the submission of the request

Impact of the measure to the most in need – High, The REI is specifically dedicated to support people in need. Several accessing conditions have been set, not only economical ones (linked to the ISEE of the family but also to the characteristics of the members of the family (children, old people, etc.). The SIA measure also addressed people in need (the ISEE must be below 3000 euro and the family financial incomes from other subsidies or incomes must not exceed 600 euro / month or 900 euro/month if there is a disable person)

Stability of the financial measure – Uncertain as the measure has just been launched (January 2018) it will undergo an intermediary assessment and on the basis of the results of the assessment, its stability will be decided. The initial measure SIA was launched in September 2016 and will be available until 2017. Starting from January 2018 the SIA measure will be changed into the REI (Reddito di Inclusion) which will include also the economic support for unemployed ( l'ASDI - Assegno di disoccupazione).

Availability of funding – Medium-high – As the SIA funding availability was sufficient to satisfy all the requests, the funding of the REI has been defined according to SIA's funding.

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Medium-low - The accessing mechanism is not easy as it foresees the submission of several modules and documents and also the development of a personalised social project by the person in need. The personalised project lasts for the duration of the support (i.e. 18 months) and its correct implementation determines the access to the financial support.

Financial support or fiscal bureaucracy – No fiscal bureaucracy, the financial support is accredited directly on the purchasing card

Finance of the measure – Medium-low - The SIA and now the REI are not a preventive measure for poverty but is a supportive measure to financially help people in need and at the same time to oblige them to undertake a personalised social project.

Installation and Post-installation support – not applicable

Guarantees – not applicable

#### **3.3.4.4 Poland**

##### **Energy Supplement (Dodatek Energetyczny)**

Eligibility with respect to energy poverty – Dedicated to vulnerable consumers that could be best defined as economically disadvantaged, rather than in energy poverty

Scope of measures – Supports the payment of energy bills, not necessarily a preventive measure

Impact of the measure to the most in need – Yes (income criteria)

Stability of the financial measure – Plan to last till at least 2023 with planned budget rising each year

Availability of funding – Paid monthly, (budget set for each year: 1) 2014 r. - 114.799.948,41 PLN; 2) 2015 r. - 118.817.946,60 PLN; 3) 2016 r. - 122.976.574,73 PLN; 4) 2017 r. - 127.280.754,84 PLN; 5) 2018 r. - 131.608.300,50 PLN; 6) 2019 r. - 136.082.982,71 PLN; 7) 2020 r. - 140.709.804,12 PLN; 8) 2021 r. - 145.493.937,46 PLN; 9) 2022 r. - 150.440.731,33 PLN; 10) 2023 r. - 155.555.716,90 PLN.)

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – It is quite easy to access as short application required, national support. Only Information on planned expenditure.

Financial support or fiscal bureaucracy – not applicable

Finance of the measure – The value is set yearly and depends on the amount of members in the household (for the period 1 may 2017 - 30 april 2018 set as: 11.22 zł/month for one person household, 15.58 zł/month for the 2-4 people household, 18.70 zł/month for >4 people household).

Installation and Post-installation support – not applicable

Guarantees – not applicable

## **Housing Supplement (Dodatek Mieszkaniowy) Eligibility with respect to energy poverty**

Scope of measures – Supports the payment of housing bills, not necessarily a preventive measure

Impact of the measure to the most in need – Yes (income criteria). Dedicated to vulnerable consumers that could be best defined as economically disadvantaged, rather than in energy poverty

Stability of the financial measure – stable unlikely to change

Availability of funding – support for 6 months counted from the first day of the month after the submission of the application for funding,

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Requires justification of revenues and spendings attached to the application. National support 18 732 założono 16 979 wykonanie

Financial support or fiscal bureaucracy –

Finance of the measure – amount: difference between the expenditure for normative apartment and the actual expenditure from the applicant. The subsidy amount depends on the income of the household members and the number of members of the household.

Installation and Post-installation support – not applicable

Guarantees – not applicable

## **Lokalny Program Osłonowy (Local Shelter Programme)**

Scope of measures - Many different investments and heating methods are supported. Set to support the limitation of emissions for relatively poor households.

Impact of the measure to the most in need – Yes (income criteria); income criteria supports the changes to limit emission heating sources

Stability of the financial measure – will last till 2022

Availability of funding – yearly funding, 887 239 PLN budget for 2016

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Requires details about investment and several attachments. Regional support. The whole city budget saved for the measure was granted to applicants (2016)

Financial support or fiscal bureaucracy –

Finance of the measure – counted as a difference in spendings between current monthly expenditure and previous expenditure: 931 zł/per household on average was granted in 2016

Installation and Post-installation support – supports the expenditure for the use of an installation rather than the solution itself and Core idea of the support

Guarantees – not applicable

## **Dotacje celowe na finansowanie lub dofinansowanie inwestycji - na terenie m.st. Warszawy, służących ochronie środowiska i gospodarce wodnej**

Scope of measures – Wide range of usually high cost measures

Impact of the measure to the most in need – NO, it does not specifically impact vulnerable consumers directly (no criteria regarding vulnerable consumers)

Stability of the financial measure – defined dates only for 2017-2018

Availability of funding – availability defined through the contract with BOŚ; 23,000,000 PLN budget planned

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – No information. High level of bureaucracy - many investment specific documents required regarding the investment, not targeted to vulnerable consumers. Regional support

Financial support or fiscal bureaucracy –

Finance of the measure – up to 75% investment per boiler exchange and up to 40% of the investment cost per RES installation

Installation and Post-installation support – Free choice, needs to fit requirements. No (subsidy agreement only before the implementation)

Guarantees – Not specified

## **Wymiana pieców (Boiler exchange programme)**

Scope of measures – Different technologies supported: gas, light fuel oil, biomass and high efficiency solid fuel boilers, connection to the municipal heating grid and RES

Impact of the measure to the most in need – NO, no criteria regarding vulnerable consumers)

Stability of the financial measure – continuously collected applications till January 2019

Availability of funding – 50.000.000 PLN - total budget for the programme

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
– No information, medium high level of bureaucracy - support through dedicated website which clarifies the requirements, regional support

Financial support or fiscal bureaucracy –

Finance of the measure – 50% of eligible costs (75% for targeted areas), not more than 20,000 zł for household, not more than 14,000 zł for a flat, and not more than 8,000 per flat for the common boiler.

Installation and Post-installation support – Free choice, needs to fit requirements

Guarantees – Not specified

## **Zasilek celowy (Special purpose allowance)**

Scope of measures – fuel for heating and necessary equipment

Impact of the measure to the most in need – Yes (income criteria). Dedicated to vulnerable consumers that could be best defined as economically disadvantaged, rather than in energy poverty

Stability of the financial measure – stable unlikely to change

Availability of funding – No information

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
– No information. There is a national support to ease access

Financial support or fiscal bureaucracy –

Finance of the measure – up to 100%, depending on case

Installation and Post-installation support – Free choice, needs to fit requirements

Guarantees – Not specified

## **Ryczałt energetyczny**

Scope of measures – Subsidy for combatants and specified related groups, supporting the payment of the energy bills

Impact of the measure to the most in need – targeted on combatants and thus targets pensioners

Stability of the financial measure – started 08.2014 - ongoing

Availability of funding – No information

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
– No information. However relatively low level of bureaucracy - specially dedicated website, with instructions, only few forms to fill

Financial support or fiscal bureaucracy –

Finance of the measure – up to 50% of electricity, gas and heating costs

Installation and Post-installation support – not applicable

Guarantees – not applicable

### **Premia termomodernizacyjna (Thermo-modernisation bonus)**

Scope of measures – Thermo-modernisation bonus is a public support scheme which aims at increasing building energy efficiency. It is awarded by the Bank Gospodarstwa Krajowego (BGK) bank as a part of the Thermo-modernisation and renovation fund (FTiR). Large scope of measures - Needs to fulfill technical requirements supported by energy audit

Impact of the measure to the most in need – Not directly (no criteria regarding vulnerable consumers)

Stability of the financial measure – stable long-lasting measure, no ending date specified, unlikely to change

Availability of funding – No information

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
– No information. high level of bureaucracy, however standardised procedures (long-lasting scheme)

Financial support or fiscal bureaucracy – 0.6% of the subsidy goes to BGK

Finance of the measure – Case specific, partial refund for the costs of loans for thermo-modernisation

Installation and Post-installation support – Flexible for user - needs to fulfill technical requirements supported by energy audit. Post-installation, partial refund for loans taken for the installation of specific measure

Guarantees – Not specified

### **PONE - pożyczki dla osób fizycznych**

Scope of measures – Specific programs for different type of measures, many measures eligible. Local initiative (Opole) aimed at improving air quality by reducing heat demand. Provides loans for specific type of projects: 1) EKO-DOM – thermos-modernisation of the buildings with the heating source exchange, 2) EKO-TERM – thermos-modernisation of the buildings without the heating source exchange, 3) EKO-PIEC the heating source exchange, 4) OZE - use of RES (similar initiatives in other cities)

Impact of the measure to the most in need – Not directly (no criteria regarding vulnerable consumers)

Stability of the financial measure – available until the end of 2021

Availability of funding – No information

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
– No information. Medium high level of bureaucracy - support through dedicated website which clarifies the requirements, regional support

Financial support or fiscal bureaucracy – not applicable

Finance of the measure – loan up to 95% of eligible costs of installation, can be partially refunded up to 20% or 30% of the loan depending on the programme

Installation and Post-installation support – Flexible for user - needs to fulfil technical requirements

Guarantees – Not specified

### 3.3.4.5 Spain

#### **Bono Social - Social Tariff**

Eligibility with respect to energy poverty – In order to receive a social tariff, consumers have to be deemed vulnerable based on specific criteria any the following criteria:

1. Having household income below a threshold for the consumer or family unit. These thresholds are: 1,5 times the IPREM (Public Income Indication for Multiple Effects) if there are no minors in the household, 2 times the IPREM if there is one minor and 2.5 times the IPREM if there are 2 minors. This IPREM multiplier could be increased by 0,5 times if: if the customer or any family members has a recognized disability of 33% or more, if the customer or any of the family members has been declared of having suffered domestic violence; or that the customer or any of the family members has been declared as a victim of terrorism.
2. Have the recognition of being a large family (irrespectively of income level)
3. All people with income in the family unit receiving a state pension either for retirement or disability and it is for minimal amounts.

In addition, there is a special category of severely vulnerable consumers, in case they have an income which is lower or equal to 50% of that of point 1 above (including the cases with disabilities, victim of domestic violence or victim of terrorism, and their corresponding income increase for computational purposes). It could also be declared severely vulnerable if the consumer or the family unit has an income below or equal to the IPREM of 14 pays/year (7.519,59 Euros) or 2 times this indicator, in case of customers or family members who have suffered domestic violence or have been victims of terrorism.

Another modification by the latest Royal Decree, is the extension to 4 months (previously it was 2) before suspending supply to a vulnerable consumer unable to pay, from the moment in which payment was officially required.

Furthermore, there is a differentiated category of consumers within the severely vulnerable, which is those who are severely vulnerable consumers at risk of social exclusion. This situation has to be properly accredited by Social Services, that has to be financing at least 50% of the utility bills of the customer. For these costumers, the supply of electricity is considered essential, therefore it cannot be suspended.

Scope of measures – The measure provides support to those in need



Impact of the measure to the most in need – Yes. In fact, in order to receive a social tariff, consumers have to be deemed vulnerable based on specific criteria (see eligibility). The Social Tariff consists of a straight discount of 25% on the electricity bills for vulnerable consumers who have a contract in the regulated market (Voluntary Price for Small Consumers – PVPC is the Spanish Acronym). Based on recent changes brought by the recent Royal Decree RD 897/2017, there is an additional new category of severely vulnerable consumers, who can receive 40% discount. Furthermore, there is a differentiated group within the severely vulnerable and are those severely vulnerable customers at risk of social exclusion. For these latter consumers, the electricity supply is considered essential, therefore it cannot be suspended. Either the 25% and 40% Social Tariffs are subject to a kWh limit of consumption per year, as shown hereunder:

- Family units without minors/individual customer: 1.200 kWh maximum limits to consumption
- Family unit with one minor: 1.680 kWh maximum limits to consumption
- Family unit with two minors: 2.040 kWh maximum limits to consumption
- Large Families: 3.600 kWh maximum limits to consumption
- Family units/individual customer – pensioners (minimum state pension): 1.680 kWh maximum limits to consumption

Any excess over these limits would be invoiced at normal PVPC rates.

Another modification of this Royal Decree, is the extension to 4 months (previously it was 2) before suspending the supply to a vulnerable consumer, from the moment in which payment was officially required.

Stability of the financial measure – Stable, the measure has just recently changed (October 2017). The norms that preceded the current one are: Royal Decree 6/2009 of April 30th, 2009 (Creation of the Social Tariff), Resolution of June 26th, 2009 (Regulation of the Social Tariff), Law 24/2013 of December 26th, 2013 (established the distribution of the cost of the Social Tariff among the vertically integrated utility companies), Royal Decree 7/2016 of December 23rd, 2016 (changed the distribution of the cost of the Social Tariff and applied it to all electricity retailers based on the number of contracts), Royal Decree 897/2017 of Oct 6th, 2017 (regulates the vulnerable consumer, the social tariff and other measures of protection for domestic consumers of electric energy).

Availability of funding – The Social Tariff can be requested any time, it only applies to contracts under 10 kW of power term, it applies only to the main residence of the customer who requests it and can be requested only when the consumer has a contract in the regulated market. If the customer is in the free market, first he or she has to move to the regulated one.

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Customers need to apply with their regulated utility company (and if they are in free market, first they would need to change to regulated market). The National Commission for Markets and Competition (CNMC in Spanish) provides all the contact information on a webpage of the regulated utility companies that provide the Social Tariff. The forms for applying are available at end of the law that regulates the Social Tariff.

Financial support or fiscal bureaucracy – Not applicable

Finance of the measure – There is no specific amount in a “funding pot”, since it is funded by all electricity retailers based on their number of contracts (not their value). In theory, the



Social Tariff should be provided to all consumer who fulfil the requirements established for it. The Social Tariff cost approximately 190 million Euros per year, before the latest modifications.

Expected uptake/demand. According to CNMC in 2016 there were approximately 2.4 million consumers with Social Tariff. According to the preamble of the October 2017 Royal Decree, there are in Spain approximately 4,5 million consumers in energy poverty, and the objective of this latest piece of legislation is to extend the coverage to more consumers.

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **Home Retrofit for People in Vulnerable Situation in Barcelona**

Eligibility with respect to energy poverty – Applicants and members of the household unit, have to meet the following requirements:

- Have a functional adaptation report that justifies the existence of deficiencies in their house in terms of mobility, safety and energy efficiency.
- Have a socioeconomic report that establishes the vulnerability of the household unit.
- Be the regular users of the dwelling proposed for the inclusion in the program.
- Do not have available any other property in the city of Barcelona, with the exception of what may be their regular and permanent home.
- Have the authorization of the property owner to execute the necessary works.
- Be in a situation of vulnerability, with income below 2.5 times the Indicator a Sufficient Income (IRSC in its Spanish acronym, an amount set periodically by the general budget of the regional Catalan government, at the moment is set at 7.967,73 Euros per year).

The program also distinguishes between applicant and beneficiary:

The applicant, will be the person of the household unit who submits the application for inclusion in the program. He or she is responsible for the veracity of the data provided.

The beneficiaries will be all those people who are members of the household unit. They will be considered members of the household unit those who are registered at the household address, with predominance of the prescriptive socioeconomic report in case of discrepancy.

Scope of measures – Beneficiaries can choose a wide range of energy efficiency options

Impact of the measure to the most in need – Yes. The Home Retrofit Program for People in a Vulnerable Situation, is a scheme run and funded by the Barcelona City Government and managed by the Housing Consortium, which consists of a subsidy for carrying out basic retrofit in those dwellings in which vulnerable people have established their regular and permanent residency. It aims to provide these homes with a minimum of living, safety, accessibility, hygiene and energy efficiency conditions.

Stability of the financial measure – This is an annual program. For 2017 the requirements were published on the 6th of April and the call for application started on the 18th of May. The window for submitting applications this year is from May 19th to December 31st 2017.

Availability of funding – The Barcelona City Council through the Barcelona City Consortium has 5 million euros available for 2017.

Actual usage of the measure in terms of percentage out of the total of the eligible consumers

- The interested applicant has to make an appointment in any office of Housing Consortium in Barcelona by accessing the link Appointment with the Barcelona City Council. On the day of the appointment they need to go to the chosen office and present the forms attached. Once the documents are presented, the Housing Office will send the individual demands to the technical direction of housing retrofit, which in turn will transfer them to the project manager company. The company assigned with the project management responsibility, will make the appropriate arrangements with the owner of the house and will carry out a home evaluation visit with the presence of the assigned company that will perform the retrofit, in order to prepare the following reports:

- A report of functional adaptation that will detail the intervention proposal to be carried out in the dwelling.
- A socioeconomic report that will consider the situation of vulnerability of the household unit.

The project management company, within a period of 30 days, will send a copy of both reports to the Housing Consortium where the applicant has submitted the application for the program and to the technical direction of Housing Retrofit.

The technical direction of Housing Retrofit, within 10 days, will propose to the manager of the Housing Consortium the approval of the budget and the execution of the proposed actions.

The approval by the manager of the Housing Consortium of Barcelona of the budget and the execution of the works will be communicated to the project management company and to the managing body, so that it can authorize the specific works.

Information on the percentage of use - not available yet

Financial support or fiscal bureaucracy – Not applicable

Finance of the measure – The Program covers 100% of the project management expenses and 100% of the retrofit expenses, with a budget proposed and approved by the Housing Consortium and a maximum of 20,000 euros per house (VAT included).

The scope of funding is those retrofits that will be carried out inside the dwellings under the following typologies of intervention:

- Retrofit of bathrooms: a set of interventions that mainly have the purpose of improving accessibility and facilitating activities related to personal hygiene.
- Retrofit of kitchens: a set of interventions that mainly have the purpose of improving safety conditions to facilitate the activities of daily living that are performed in the kitchen.
- General retrofit: a set of interventions that mainly have the purpose of making adaptations and / or provide support in the general environment of the home to facilitate the general mobility of the person at home.

Complementary actions to improve the energy use in homes in order to avoid energy poverty: a set of interventions that can complement the above-mentioned retrofits and whose purpose is to improve the energy efficiency of homes.

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **Ayudas de Urgencia Social (Local Financial Support for Vulnerable Consumers)**

Eligibility with respect to energy poverty – Beneficiaries of the program generally have to meet a residency requirement (within the municipality) and an income requirement (not exceeding a certain amount). Details and limits are established by the specific municipalities.

Scope of measures – The only measure that is provided is the payment of the bill or a part of it.

Impact of the measure to the most in need – The measure addresses those most in need. Spanish municipalities, through social services manage economic contributions to cover urgent needs (food, energy, water, housing...). Each municipality details its terms and calls to manage this funds. They are targeted to the most vulnerable people who have problems paying the bills.

Stability of the financial measure – Yes. It is a historic aid provided by municipalities to the most need.

Availability of funding – The total size of the budget is not available, it is available for the: Regional programs managed by municipalities in Spain and these fund are managed by Social Services of the municipality. The money has been made available from the General autonomic budgets and local budgets.

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Information on the actual usage not available yet

Financial support or fiscal bureaucracy – Not applicable

Finance of the measure – Not applicable

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **Financial support in form of subsidy offered by Zaragoza housing consortium**

Eligibility with respect to energy poverty – • Homeowners associations in which at least 60% of the owners (calculated in relation to each household unit), have a gross income below 2,5 times the sufficient income indicator (IPREM in Spanish, Income Indicator of Income of Multiple Effects, currently at 7,519.59 Euros in 2017). • Individual persons who are homeowners from a regular and permanent place of living, with gross income below 2,5 times the IPREM.

Scope of measures – Beneficiaries can choose a wide range of energy efficiency options

Impact of the measure to the most in need – This program aims to resolve serious issues of housing conservation, energy poverty and/or accessibility. This program provides financial support in form of subsidy to vulnerable people who own a household or owners' associations in which 60% of the owners are in a vulnerable situation.

Stability of the financial measure – Not stable. The program it is not open at the moment. Applications were accepted until January 31st, 2017.

Availability of funding – The subsidy will cover up to 80% of the costs mentioned in the point before, after deducting other subsidies provided by public or private entities.

The limits are:

## Conservation

- Individual works: Up to 4,000 €/dwelling
- Common works: Up to 12,000 €/dwelling

## Energy Efficiency Improvement

- Individual works: Up to 4,000 €/dwelling
- Common works: Up to 9,000 €/dwelling

## Accessibility

- Individual works: Up to 6,000 €/dwelling
- Common works: Up to 15,000 €/dwelling

The direct costs of the retrofitting interventions, specifically include:

- The costs of the retrofitting intervention (as per budget approved)
- Project management (which includes technical project, report and safety assessment)
- Building administrator fees
- Municipal licenses and fees
- Auditing of the settlement of accounts
- If VAT was not deductible by the beneficiary, it will be also subject to financing

In case there were other works going on at the same time, the financing will apply only to the share of the expenses that would be common.

### Actual usage of the measure in terms of percentage out of the total of the eligible consumers

– Applications to this program should be presented at the Information Unit and Citizen Support (UIAC – Unidad de Información y Atención al Ciudadano) of the Zaragoza Housing Consortium, San Pablo Street N° 48 in Zaragoza. Opening hours: Monday to Thursday 9:00 - 17:00, Friday 9:00 - 14:00.

The applicants should present the following documents:

- Application filled out in all its sections, specifying if the applicant is an owners association or an individual person, including a declaration of any other public support requested or obtained for the same purpose
- Copies of personal identification document of the applicant or representative (with original documents to validate them)
- Registration of residency issued by the city council
- Economic report for the works for which the subsidy is requested
- Certification of being up to date with Social Security payments and Taxes
- Income information of the members of a family unit
- Certificate of disability, including its degree, in case of requesting accessibility interventions
- Third party form, stamped by the bank, for transferring funds

In case of significant works, they should include a technical project that describes the interventions, the different items and its costs, all signed by an accredited technician. This document could be submitted once the subsidy is approved.

In case that the applicant was an owners' association, they should include a certificate in which appears the agreement to proceed with the works, as well as the percentage of owners (participation) that supports the works, the commitment to proceed with the works (if the subsidy is authorized) and the appointment document of the president and administrator of the owners' association.

In order to receive this subsidy, the technical services from the Zaragoza Housing Consortium should submit a favourable report recommending this subsidy.

Information not available yet on the actual usage of the funding.

Financial support or fiscal bureaucracy – Not applicable

Finance of the measure – Not applicable

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

### 3.3.4.6 UK

#### **Energy Company Obligation (ECO) CERO/HHCRO/FLEX**

Eligibility with respect to energy poverty – Home Heating Cost Reduction Obligation (HHCRO) - You are eligible under this aspect of ECO if you receive at least one of the following benefits and satisfy the relevant income requirements, where applicable: • Income-related employment and support allowance (ESA), • Income-based jobseeker's allowance (JSA), • Income support, • Pension Credit Guarantee credit, • Tax Credits (on the condition that the household's relevant income does not exceed the amount set out in our scheme guidance), • Universal Credit (on the condition that the household's relevant income in any of the preceding 12 assessment periods does not exceed the amount set out in our scheme guidance).

Up to 10% of HHCRO funding can be delivered through eligibility criteria that are determined through the Local Authority. These criteria will be confirmed in the Statement of Intent, which will be published on the LA's website.

The Carbon Emissions Reduction Obligation (CERO) - Under this element of the scheme there are no specific eligibility requirements, except that a certain proportion of measures must be delivered in rural areas

Scope of measures – Insulation (CERO and HHCRO); Solid wall insulation; Cavity wall insulation; Loft insulation; Other insulation (windows, doors, under floor); Heating Systems (HHCRO only); Boiler repairs or replacements; Electric Storage Heater repairs or replacements; System upgrades; Microgeneration Installations

Impact of the measure to the most in need – To an extent - Yes. The eligibility criteria is there to ensure that only the most vulnerable and fuel poor are targeted, however the effectiveness of these criteria is difficult to gauge.

Stability of the financial measure – Scheme is open to changes from central government. Current version runs until September 2018 when it is expected to be revised, but unsure at present how this will affect the scheme.

Availability of funding – The ECO Scheme commenced in January 2013 (ECO1) and has now been extended and will continue until September 2018 (ECO2t).

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Information not available. Funding availability can change. Not always fully funded, which can limit the accessibility.

Financial support or fiscal bureaucracy – None

Finance of the measure – Full or partial funded installations in households

Installation and Post-installation support – None available

Guarantees – 1 year warranty

## **Renewable Heat Incentive (RHI)**

Eligibility with respect to energy poverty – To qualify for the domestic RHI the renewable heating system must heat only a single property which is capable of getting a domestic Energy Performance Certificate(EPC).

Scope of measures – The eligible heating technology types for the RHI are: • biomass boilers and biomass pellet stoves, • air source heat pumps, • ground source heat pumps, • flat plate and evacuated tube solar thermal.

Impact of the measure to the most in need – Funding only goes towards those with RHI technology installed. Not really targeted at energy poor households.

Stability of the financial measure – Ongoing scheme. Applications must be made within 12 months of the installation date

Availability of funding – Funding depends on amount of renewable energy produced

Actual usage of the measure in terms of percentage out of the total of the eligible consumers – Information not available. Quarterly cash payments are made by Ofgem based on the estimated number of units of renewable heat produced (in kWh)

Financial support or fiscal bureaucracy – If you're using heat solely for personal domestic use, the payments you receive aren't chargeable to Income Tax.

Finance of the measure – Through the RHI you are paid for every unit (kilowatt hour; kWh) of renewable heat you produce. Payments are made quarterly and continue to be paid at a guaranteed rate for a period of seven years. This rate is inflation linked, tracking the Consumer Price Index (CPI). The amount you are paid depends on the technology installed.

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **Winter Fuel Payment**

Eligibility with respect to energy poverty – Over-65s

Scope of measures – Help towards heating costs over winter

Impact of the measure to the most in need – Directed at the over 65s, regardless of income, so not targeted at people on low income but using age as main criteria for vulnerability.

Stability of the financial measure – Ongoing. Scheme is open to changes from central government.



Availability of funding – Consumers have until 31 March 2018 to claim for winter 2017 to 2018

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
– Information not available. Payments are made automatically between November and December to those who have claimed it before or who are in receipt of the State Pension or another social security benefit (not Housing Benefit, Council Tax Reduction or Child Benefit). If the householder hasn't claimed before or isn't in receipt of these benefits they will need to obtain a claim form by calling the Winter Fuel Payments helpline on 03459 151515

Financial support or fiscal bureaucracy – None

Finance of the measure – Annual payment of between £100 and £300

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## **Warm Homes Discount Scheme**

Eligibility with respect to energy poverty – You will be eligible if: • your electricity supplier is part of the scheme, • your name (or your partner's) is on the bill, • you are getting the Guarantee Credit element of Pension Credit (even if you get Savings Credit as well)

You also may be eligible (check with your supplier) if • you're on a low income, • you get certain means-tested benefits

Scope of measures – The Warm Home Discount is a programme of support aimed at households who may struggle with their energy bills. The scheme was introduced by Government on 1st April 2011 and will run until 2021. Electricity suppliers will deliver the scheme and will primarily help qualifying customers by providing rebates on electricity accounts to help when bills may be higher over the winter period.

Impact of the measure to the most in need – Eligibility varies by energy supplier which can be confusing but should in general meet criteria regarding income etc.

Stability of the financial measure – Scheme confirmed until March 2021

Availability of funding – Scheme confirmed until March 2021

Actual usage of the measure in terms of percentage out of the total of the eligible consumers  
– Information not available. • If you qualify, you'll receive a letter by 30 November telling you how to claim the discount.

• Your electricity supplier will apply the discount to your bill by the end of March.

Financial support or fiscal bureaucracy – None

Finance of the measure – One off discount from Electricity bill of £140 between October and March

Installation and Post-installation support – Not applicable

Guarantees – Not applicable

## 4 A summary of the national and European measures addressing vulnerable consumers and energy poverty

The approach to energy poverty across European Member States, varies widely. Whilst some countries recognize it as a significant issue, for others it is not especially prevalent or is so intertwined with other problems, often associated with wider poverty issues that addressing it gets lost.

Whilst a one size fits all approach would ultimately not work for all European Member States, the recommendation is that it would be beneficial to have a universal definition but one that is wider than just energy poverty to cover vulnerability more generally.

### 4.1.1 Methodology

#### 4.1.1.1 Methodology for context data collection

- In order to carry out this mapping exercise a number of activities were undertaken:
- A desk-based literature review of European Commission funded energy poverty initiatives, in particular H2020 and IEE, carried out in the 10 years since the Serenade report in 2007. (Full list can be found in Annex 1)
- Following the desk based review, questionnaires were developed and circulated amongst the ASSIST partners for completion (Annex 2). The purpose of these questionnaires was to update our understanding of circumstances surrounding energy poverty in these specific nations since the Serenade report, adding depth and/or clarification to specific areas of interest.
- To ensure complete European representation, partners used their wider international networks to circulate a questionnaire that whilst less detailed than the one they had completed, provided the information needed to ensure this report would reflect on the situation throughout Europe. (Annex 3)

It should perhaps be noted that whilst questionnaires are able to provide a very useful snapshot as to how energy poverty is viewed in each country and the efforts in place to address it, they do have their limitations. Notably that they are the views of a small number of people, sometimes just one person from one organisation. Whilst steps were taken to ensure that the interviewee would have the knowledge needed to complete the questionnaire, in those countries where energy poverty is still a relatively new concept, this might not always have been the case. Some interviewees and indeed a number of schemes to address energy poverty are carried out at the local or regional level and therefore, keeping track of them all, certainly if the interviewees themselves were local, could potentially provide a gap in knowledge. Nevertheless, they do most certainly provide a flavour of what work is taking place on the ground in that country.



Of the 28 European countries, questionnaires were completed by 27 with only Latvia outstanding for the lack of being able to locate the correct organization to approach. The depth of responses varied widely; some were immensely detailed whilst others provided mainly yes and no answers. On the whole, the depth of response appeared to reflect that country's engagement on the issue, indicating that for one reason or another, energy poverty was not specifically on their radar.

#### **4.1.1.2 Methodology for EU project analysis**

Desk-based research of EU projects was carried out to provide partners with a basis for activities and recommendations. For this purpose, different sources were used<sup>2</sup>.

The criteria for selection were:

- Projects that included at least 2 EU member-states;
- Projects that targeted household/family energy consumption. As a rule projects that addressed energy efficiency of buildings were excluded – exceptions could be made if project's activities included other actions of interest to the ASSIST project;
- Projects that prioritise, in some way, energy poverty and/or vulnerable consumers;
- Projects that are linked to ASSIST activities and envisaged outputs (research in the field, establishing Home Energy Advisor training, Home Energy Advisor networking, energy services for vulnerable consumers/energy poor, energy saving due to behavioural change, policy proposals with reference to energy poverty/vulnerable consumers and identified opportunities for a better protection of vulnerable consumers);
- Most of the projects were recent, but older projects that were relevant to the ASSIST project were included as well. On-going projects were also included if they had already produced some results that could be useful to ASSIST;
- Projects that could had 'good practices' recommendations or suggestions;
- Important publications in the field of ASSIST are regarded as projects.

As a result 30 projects (see Annex 1) were selected. Although not representative, the sample provides an idea of the state, main directions and activities regarding energy poverty and vulnerable consumers within EU projects. The EU projects reviewed could be classified as follows:

---

<sup>2</sup> The following sources were used: a) <http://ec.europa.eu/energy/intelligent/projects/> - EC Intelligent Energy Europe – the web page includes more than 800 projects; <https://ec.europa.eu/easme/en/news/energy-efficiency-projects-tackle-energy-poverty-support-most-vulnerable-consumers> - Website of the EASME with some on energy poverty projects included; The list of the projects invited for the Contractors meeting Consumer Engagement for Sustainable Energy 3-4 April 2017; Research projects and Publications on energy poverty

1. With regard to the basic focus of the action the projects could be divided basically into action projects and research projects and others.
  - Action projects as a rule are engaged with different activities and target groups, including vulnerable consumers and energy poverty. They aim to produce some clear outputs and concrete results and they invest in different types of activities linked directly or indirectly with consumers; often they are focused on some behaviour change leading to energy savings. Research is usually included in these projects but it is clearly secondary to the basic focus of activities.
  - Research projects that review and analyse the state of play in connection with energy poverty and vulnerable consumers.
  - A few of the projects do not fit clearly into this typology as their basic focus is research linked to some concrete activities (for example, accreditation system for professional trainings)
2. By geographical coverage the projects could be divided into 2 categories as well:
  - Six of the reviewed projects, especially research projects, were EU wide, providing comparative data on energy poverty and vulnerable consumers and sometimes actions in all the member states.
  - The remaining 24 projects, most of which were action projects, involved a different numbers of countries (anywhere between 2 and 16). In some of these projects data for all the EU countries is presented. Still their activities as a rule are implemented mainly in the partner countries of the respective project (see Annex 2, including partner countries in the reviewed projects). It is noteworthy that some Member States are very rarely represented or not represented at all among the partners in the projects under consideration.
3. Timeline – 26 of the reviewed projects are completed. They all have been implemented within the last decade. The earliest start of a reviewed project is 2006. The other 4 projects have started but are not completed (EPOV, Smart-up, Step by Step, Citizens Forum).

In 13 of the reviewed 30 projects at least one (sometimes two) partner(s) in ASSIST project have been engaged. This provides a good basis to exchange and upgrade on previous activities.

## 4.2 Summary of National Measures

### 4.2.1 How have different Member States defined issues of energy poverty and vulnerable consumers?

One of the key aims of ASSIST is to train a European network of Home Energy Advisors (HEA) whose role will be to provide energy advice to vulnerable households within their own country. In order to do this, it is essential to understand how Member States identify and support vulnerable consumers and how they alleviate and/or tackle energy poverty.

The questionnaires described above asked the following:

- In reference to the list of energy poverty definitions, is there a definition for the country concerned?
- Do you use the welfare system as a way to actively identify (not define) vulnerable consumers?

Country	Is there a formal definition of energy poverty?	How are vulnerable consumers identified?
Austria	No though there is an informal definition which is widely used “Energy poverty affected: are households which have an income below the poverty threshold and at the same time have high energy costs above-average”	The welfare system
Belgium	<p>The following definitions (based on three different indicators) are used for official reporting on energy poverty in Belgium:</p> <p>The ‘measured energy poverty’ indicator: based on the Boardman approach (used in the UK to define fuel poverty). Each year, the median value of the ratio between energy expenditures and equivalent household income (corrected for the household size) is calculated. A ‘boundary value’ is defined as twice the value of the median value. If a household spends more on energy than indicated by the boundary value (in %), this household is considered as an ‘energy poor’ household in an objective sense.</p> <p>The ‘hidden energy poverty’ indicator: concerns the fraction of the Belgian households that is reducing their energy use to the extent that it might have a</p>	<p>Vulnerable consumers can be entitled to certain benefits that help them in paying their energy bills.</p> <p>Depending on the exact nature of the benefit (e.g. access to a social energy tariff, free energy scan, social renting tariffs for energy-saving, etc.) different welfare system parameters are used to specify the eligible customers.</p>

	<p>negative impact on living conditions and quality of life in general. The hidden energy poverty indicator is calculated based on the comparison of a household's energy expenditures with the average energy expenditure of a comparable household (with the same number of inhabitants) living in a comparable dwelling (with the same number of rooms). If a household spends less than half of the average of a comparable household living in a comparable dwelling, and if this household belongs to the 50% of households with the lowest equivalent incomes in Belgium, this household is considered to be in a situation of hidden energy poverty.</p> <p>The 'subjective energy poverty' indicator: is based on the percentage of households that report having difficulties to adequately heat their dwelling.</p>	
<b>Bulgaria</b>	No	The welfare system provides heating benefit for those households where their monthly income in the last 6 months is lower or equal to the differentiated minimum income. (Insight E Report)
<b>Croatia</b>	No	Vulnerable consumers are those recipients of social welfare or those with disabilities, who are eligible for a monthly deduction in their electricity bills of about 26 Euros per month independently of the amount of their bills.
<b>Cyprus</b>	<p>Yes</p> <p>Energy poverty may relate to the situation of customers who may be in a difficult position because of their low income as indicated by their tax statements in conjunction with their professional status, marital status and specific health conditions and therefore, are unable to respond to the costs for the reasonable needs of the supply of electricity, as these</p>	Welfare system.

	costs represent a significant proportion of their disposable income.	
<b>Czech Republic</b>	No	Through the welfare system - households, who spend 30% (35% for Prague) of total income on housing costs are entitled to state housing benefits.
<b>Denmark</b>	No	Welfare system
<b>Estonia</b>	No	Energy poverty is not identified as an issue separate to poverty more generally. Through the Social Welfare Act a person living alone or a family whose monthly net income, after the deduction of housing expenses, is below the subsistence level has the right to receive a subsistence benefit.
<b>Finland</b>	No official definition of energy poverty but the Ministry of Environment has defined energy poverty in their study as follows: Energy poverty refers to the difficulty of maintaining or satisfying the basic needs due to energy costs. This means difficulty or inability of maintaining an appropriate temperature in the apartment (separate houses) or difficulty of paying for other essential energy-related services (e.g. household electricity, hot water use). They also include transport energy when it is of necessity. Finland is a sparsely populated country, where the basic services can be at a distance of tens of kilometres. The car can be a necessary for maintaining livelihood and social relations.	There is no official definition of vulnerable consumers that includes reference to energy/energy poverty. The Ministry of Environment has defined people at being risk of Energy Poverty as households with small income and large non-energy efficient housing.
<b>France</b>	No	Welfare system
<b>Germany</b>	No	Welfare system.
<b>Greece</b>	Yes  Law 4001/2011 defines the criteria, conditions and procedure for integration of customers into the vulnerable customer registry. These customers are	No formal procedure, tends to rely on self-identification to access support programmes or initiatives.

	defined by having low income, families with three children or more, long-term unemployed, disabled people, people on life support, as well as elderly people based on specific income criteria	
<b>Hungary</b>	No	The social welfare system identifies vulnerable consumers. An appropriate body certifies their vulnerable consumer status eligibility which they will need when dealing with their energy provider.
<b>Ireland</b>	Yes Spends more than 10% of its disposable income on energy services in the home.	Welfare system.
<b>Italy</b>	No An informal definition provided by the Authority for Italy.... A family is vulnerable when more than 5% of income is spent for electricity and 10% for gas.	Primarily through the welfare system and the SIA initiative – an organised programme to help households address the reasons behind their state of poverty. Other financial indicators are also used.
<b>Latvia</b>	No data available	No data available
<b>Lithuania</b>	No	Welfare system.
<b>Luxembourg</b>	No Whilst there is no formal definition, The Luxembourgish institute for socio-economic research (LISER) defines energy poverty on the household level by the fact that they do not have enough money to heat their homes or that they were not able to pay their electricity, gas, water and heating bills with their own financial resources during the last 12 months.	Welfare system.
<b>Malta</b>	No	The welfare system – low energy benefit system for low income families.
<b>Netherlands</b>	No	At the municipality level, social organisations working on debt mediation have a network for sharing information. Households

		with debts in several domains can be contacted by municipal energy advisors to offer free advice on how to pay the energy bill.
<b>Poland</b>	There is no definition and trivial way to identify a vulnerable consumer to energy. Vulnerable consumer is the person entitled to the housing allowance from social welfare system, but not everyone is vulnerable to energy. Fulfilment of this condition gives consumer possibility to apply for energy supplement."	Welfare system. Vulnerable consumers can get household benefit based on a series of low income criteria. However, regional local government can give additional subsidies based on their own criteria.
<b>Portugal</b>	No	Response uncertain
<b>Romania</b>	Yes  Energy poverty: when it is impossible for a person or household to meet their minimum energy needs: lighting, optimal heating of the home during winter, support of cooking facilities and hot water supply in the dwelling, but also the use of means of communications that require energy	Welfare system
<b>Slovakia</b>	Yes  Energy poverty is defined as a condition when average monthly household expenditures for the consumption of electricity, gas and heat, represent a significant share of the average monthly household income.	No formal process for identifying a vulnerable consumer.
<b>Slovenia</b>	Formal definition currently being developed	The welfare system currently uses financial measures to identify those households at risk of energy poverty. Looking at those living below the poverty line; who are the recipients of social or financial support and those who, are disconnected from their energy supply.
<b>Spain</b>	No	There is a definition for vulnerable consumer that includes a reference to energy.



		The welfare system identifies vulnerable consumers and increasingly, GP practices.
<b>Sweden</b>	No	Response uncertain
<b>UK</b>	Yes A household to be energy poor if 1. their income is below the poverty line (taking into account energy costs); and 2) their energy costs are higher than is typical for their household type (DECC 2013).	The welfare system looks at age and health conditions of household members as well as their income. A energy poverty assessment is carried out (Low Income High Cost) which also looks at the SAP score of the property.

Interestingly the majority of Member States do not have a formal definition of energy poverty though this does not appear to preclude them from necessarily addressing it as an issue and identifying measures to help vulnerable consumers. A number of respondents to the questionnaires said that whilst there might not be a national definition for their country, there might be an informal one or they would use the World Health Organisation definition '*Fuel poverty is defined as having to spend 10% or more of a household's net income to heat their home to an adequate standard of warmth*'

In terms of vulnerable consumers, each country's welfare system, perhaps not surprisingly, appears to be the primary method of identifying those households who in energy poverty or at risk of it but in the majority of cases it is consumed within the wider bracket of vulnerability and poverty which looks at a whole host of other indicators.

#### **4.2.2 What different measures have Member States put in place to address the issues of energy poverty and vulnerable consumers?**

The risk to households of energy poverty will be a function of five factors <sup>3</sup>. As a result of the research carried for this project, a sixth factor has been added.

- The rate of energy price rises versus income growth
- Ability to access cheaper energy prices
- Household energy needs

<sup>3</sup> Preston et al, 2014 taken from Insight-E, Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures. Steve Pye (UCL), Audrey Dobbins (USTUTT), May 2015

- Efficiency of energy use
- Policy interventions
- Reluctance to ask for help

Ultimately, however, the outcomes of energy poverty are the same, where households will forgo energy use, have arrears in energy accounts and forego consumption in other areas, all of which have a chain reaction of consequences e.g. Impacts on health<sup>4</sup>

If Member States are to address energy poverty, they need to introduce interventions that take into account the risks listed above.

#### **4.2.2.1 Financial interventions**

Financial interventions are a fundamental instrument to support vulnerable consumers since a lack of finance is one of the key factors for all people in energy poverty. Nevertheless, it has a tendency to focus on short-term relief and does not address some of the other fundamental factors involved in energy poverty.

The majority of Member States offer some kind of financial intervention for those who are most vulnerable though it might not necessarily be targeted specifically at paying for the household's energy bill, it might be identified and distributed through a country's social welfare system. In the majority of cases this is done nationally though certainly in some such as France, Poland, Croatia and Romania this may also be through local networks such as municipalities or organisations such as the EnergieBank in the Netherlands.

In some countries, namely the UK, Ireland, Romania and Croatia, there is a more targeted financial intervention with the use of a national winter energy payment scheme where households identified as most at risk of energy poverty are paid a set sum. In Croatia this is 100 Euros in the UK it is 151 Euros.

#### **4.2.2.2 Additional consumer protection**

Whilst ultimately it comes down to finance for many households in or at risk of energy poverty, the majority of Member States provide vulnerable consumers with additional consumer protection to protect them from the vagaries of the retail energy markets.

##### **1. Protection against disconnection**

In a number of Member States there is protection for vulnerable consumers against disconnection, most especially during winter periods (Belgium, Finland, Spain and Greece) where those who are disconnected due to lack of payment must be reconnected. In Spain this protection is available for the whole year, not only winter period, but only available for extreme vulnerability. In Croatia this protection is extended to all who are on the social welfare register but it might not necessarily help those who have only recently entered into economic hardship, perhaps because they have just lost their job. Some Member States don't seem to offer this at all –Slovakia where a Distribution System Operator is simply

---

<sup>4</sup> Grevisse, F. And Bryant, M. (2011) Energy poverty in Europe: Towards a more global understanding. ECEEE 2011 Summer Study

obliged to warn if there is going to be a disconnection or interruption to the energy supply. In Belgium there are a number of steps that need to be taken before a household is disconnected, which include the account being taken from a commercial supplier to the DSO and the installation of a budget meter.

## **2. Social tariff**

A number of Member of States have added a layer of protection for vulnerable consumers with the introduction of social tariffs (Cyprus, France, Greece, Spain, Italy and Belgium).

### **4.2.2.3 Energy efficiency**

For the majority of Member States, the problems of energy poverty are intimately linked with that of the energy efficiency and build quality of a vulnerable consumer's home. Inevitably those on low incomes live in rented dwellings of low quality and high bills because this is all they can afford. This problem however, also exists for many Member States where in more rural areas vulnerable consumers are living either in particularly old and poorly maintained properties or where they do not have access to more energy efficient forms of heating. The responses from a number of the questionnaires used to compile this report identified that a large proportion of their housing stock was built before building codes (which includes energy efficiency) were introduced (Greece, Slovenia, Croatia, Spain, Poland, Italy, Cyprus, Belgium) and therefore, tended to be hugely energy efficient.

In recent years the majority of Member States have introduced some kind of loan or grant scheme for the retrofit of buildings and installing energy efficiency measures. However, these appear to have been introduced primarily for the carbon savings that can be achieved and thus are often open to all, not specifically for low income groups (Greece, Croatia, Slovenia, France, Finland, Austria, Poland, Cyprus, Romania). In the case of Denmark, there was a scheme to exchange old oil boilers for natural gas boilers or heat pumps but for financial reasons this has now been discontinued. Equally Finland has now discontinued its energy efficiency subsidy scheme for households. The only subsidies now available are for the elderly or disabled and are meant as improvements to help them stay in their homes which might mean the subsidies are used for energy efficiency or heating improvements.

In the case of some Member States these energy efficiency retrofit programs were funded at a local level through municipalities as in the case of Lithuania. Barcelona for example, provides financial incentives for the renovation of properties and in the case of vulnerable consumers this can be up to 100% funding.

Other renovation programs are focused more specifically on providing energy efficiency measures for the homes of more vulnerable consumers (Czech Republic), in Belgium there is a 'social renovation' grant for private dwellings on the rental market that are below a certain rental price. In the UK the government energy regulator administers the ECO scheme – a requirement upon energy companies to install energy efficiency measures to vulnerable households.

#### 4.2.2.4 Information provision & raising awareness

Vulnerable consumers, whilst being one of the most important sectors of society for improving energy literacy are, paradoxically, one of the hardest to reach. Generally where there is a stronger recognition and movement to address energy poverty, there are more campaigns to raise awareness.

Transparent billing & price comparison: Often something that is driven nationally and by governments, several Member States have implemented policies to force utility companies to provide clear and transparent billing advice with clearly defined information on tariffs. The success of these policies seems somewhat varied; Croatia and Spain for example both indicate that whilst these policies are present there is significant room for improvement. Other countries such as Romania, UK and Netherlands appear to have had more success. In the UK, the government's energy regulator ensures that energy companies provide considerably more simplified bills with information on cheaper tariffs. The Netherlands, like the UK also provides considerable national and local energy information on price comparison and tariff switching.

Energy advice: what constitutes energy advice is an interesting area. The bullet points below are taken from the questionnaires - each respondent was asked whether they thought each bullet point represented energy advice.

- Raising general awareness of, and attracting attention to, the issues. e.g. items in the press/media; flyers; websites; contact with community and trade groups; targeted events
- Providing general information to explain the problems and relevant actions. e.g. leaflets; websites; factsheets; guidebooks
- Providing guidance on someone's specific situation and suggesting actions that could be taken. This requires some interaction with the client. e.g. Interaction with the client via telephone; interview; visit; advice stand; written reports with specific recommendation
- Activities to raise the level of knowledge, with a longer term perspective, not necessarily intending to achieve immediate action. e.g. inclusion in school curricula; professional or vocational training; community based adult education

The majority of Member States have some form of energy consumption information but whether it can all be considered advice is the question. At its most basic level, countries like Greece and Slovakia have humanitarian, voluntary groups and NGOs who are able to provide energy advice to vulnerable consumers but there are no public services. Others such as Finland, Spain, Denmark, Czech Republic, France and Italy provide energy advice perhaps through energy advice centres but more often a web-based service that may not necessarily be targeted at vulnerable consumers.

For other Member States advice can be much more targeted. Both Slovenia and Belgium provide an energy advice network with home energy advisors whose central role is to support vulnerable consumers. Similar initiatives take place in the UK - the BESN (Big

Energy Saving Network) trains front-line workers to both spot energy poverty in the vulnerable consumers they work with but also to provide energy advice. In the Netherlands local support in terms of energy advice is given as part of a debt mediation programme whilst in Spain support appears to be given at a more regional level. A number of Spanish municipalities have been piloting a system called PAE (point of energy assistance), and in Barcelona this means the provision of 10 information points within the city. Any consumer is able to visit these information points for assistance; however vulnerable consumers can receive additional support for in terms of switching contracts, changing the terms of the contract or getting help to stop a disconnection. In Poland there is local support based on the welfare system, but it is not focused only on energy and energy poverty, however in a lot of municipalities, local government support vulnerable consumers and all of their energy efficiency action.

If we are looking to provide energy advice to vulnerable consumers we perhaps need to understand who our vulnerable consumers are.

When looking at vulnerable consumers the following factors need to be considered<sup>5</sup>

Consumer vulnerability across key markets in the EU 2016:

- Having difficulties choosing and accessing products and services is the most important driver of consumer vulnerability. Consumers who are not able to read terms and conditions due to small print, who do not know their contract conditions, who rarely compare deals from providers or who rarely read or thoroughly understand communication from their providers, are more likely to be vulnerable in some indicators compared to their peers.
- Both young and old age can be drivers of consumer vulnerability depending on the situation. Furthermore, consumers who are non-native speakers, female, poorly educated or who live in low-density regions are more likely to be vulnerable in some indicators compared to other consumers.
- Consumers in difficult financial situations are generally more likely to be vulnerable compared to other consumers. Furthermore, consumers who suffer a long-term sickness or disability are more likely to be vulnerable in some indicators, such as having limited capacity to maximise their well-being, compared to other consumers.
- Not using the internet overall, and not using the internet to search for information is associated with a higher likelihood of vulnerability in some indicators.
- Consumers who are considered as credulous, impulsive or risk averse and consumers who have poor computational skills or are less trusting of people in general are more likely than others to be vulnerable in certain indicators.

If we are looking at providing energy advice to vulnerable consumers, households that are at risk of or are already in energy poverty we need to recognise that many of the factors listed above will be barriers to providing effective advice and support. It is very possible that

---

<sup>5</sup> [http://ec.europa.eu/justice/newsroom/consumer-marketing/infographs/consumer-vulnerability/index\\_en.html](http://ec.europa.eu/justice/newsroom/consumer-marketing/infographs/consumer-vulnerability/index_en.html)

those most at risk will not have access to online information and therefore online only energy advice and switching services will not benefit them. Even written leaflets may be too complicated for them to work out or not provided in their own language. Many schemes and advice pathways are also dependent upon consumers organising support themselves either by completing forms or making phone calls both of which may be too difficult for the individuals to perform, thereby creating a hole in the safety net designed to help them.

The questionnaire circulated (Annex 2) asked whether the following interventions could be considered as giving energy advice:

- Raising general awareness of, and attracting attention to, the issues. e.g. items in the press/media; flyers; websites; contact with community and trade groups; targeted events.
- Providing general information to explain the problems and relevant actions. e.g. leaflets; websites; factsheets; guidebooks.
- Providing guidance on someone's specific situation and suggesting actions that could be taken. This requires some interaction with the client. e.g. Interaction with the client via telephone; interview; visit; advice stand; written reports with specific recommendation.
- Activities to raise the level of knowledge, with a longer term perspective, not necessarily intending to achieve immediate action. e.g. inclusion in school curricula; professional or vocational training; community based adult education

Interestingly, Portugal, Slovenia, Netherlands, Belgium and UK all felt that certainly the first 2 points could not be considered advice on the grounds that it is not targeted and does not necessarily reach or address the individual in need.

#### **4.2.3 What are the similarities/differences across Member States with respect to recognition and definition of the issue, and policy measures implemented to address the issue?**

*Energy poverty is an issue that is growing in both recognition and prevalence across Europe<sup>6</sup>, nevertheless, how each Member State approaches tackling the issue vary widely and is dependent upon a number of issues.*

The UK and Ireland have a long history of academic research looking at and tackling the issue of energy poverty. There are other Member States for whom there is a formal definition for energy poverty and where addressing it is integrated into either their national or regional policy such as Belgium, France and Cyprus. Equally there are Member States for whom there is no formal definition but for who it is an issue which is recognised and being

---

<sup>6</sup> Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data. Indoor & Built Environment, Vol 26(7), February 2017.



addressed either nationally or more commonly at a regional level and often as part of a wider welfare programme, Netherlands and Spain.

Interestingly, in response to the questionnaire, some of the newer Member States from Central and Eastern Europe acknowledged that whilst energy poverty was still a relatively new concept, it was becoming an increasingly widely recognised issue and one that was starting to be addressed. The questionnaires indicated that the issue was predominantly down to old and inefficient housing stock that hadn't been maintained in recent years and had been constructed before building controls were introduced. They often have the added complication of district heating systems which do not allow individual dwellings to regulate the temperature or timings. Slovakia and Romania both have a formal definition for energy poverty, in Slovenia it is in the early stages of development, whilst in Poland there is no formal definition it does, however, informally use the World Health Organisation definition.

Lastly, there are a number of Member States for whom energy poverty not does appear to be an issue and is certainly not considered as outside of their existing welfare system, this is particularly the case in the Scandinavian countries and Austria. Denmark does acknowledge that as an issue it can occur in rural areas where households do not have access to energy efficient heating, and as is true in many cases, those most at risk tend to be elderly. Nevertheless, it does not appear to be driving any policy change. Without talking to those who completed the questionnaires, it is difficult to fully ascertain why energy poverty is not a particularly big issue in these countries, however, from an outsider's perspective; the following points could be contributory factors:

- Build quality – northern European homes tend to be very well insulated.
- Higher standard of living with a more effective welfare system
- Comparatively lower cost of energy, particularly electricity, compared to income.

## **4.3 Summary of Selected EU projects**

### **4.3.1 The focus on vulnerable consumers and energy poverty - the way vulnerable consumers and energy poverty are addressed;**

The addressing of the vulnerable consumers and energy poverty could be considered in terms of identification, basic focus of the undertaken actions and outcomes.

#### **4.3.1.1 With regard of identification several approaches could be delineated:**

The first approach - clearly linked to some of the action projects - addresses vulnerable consumers and energy poverty through existing national social policy and social assistance measures. The identification is policies-based and the assumption is that existing policy measures clearly identify the population of citizens who need support. As a result, vulnerable consumers are identified as those who already receive some support from social services



and can therefore be reached through social workers. Strength of this approach is the clear focus on those users who are already identified by social services as being in need. This strong side is not to be underestimated as it undoubtedly will address a group of citizens in need (as a rule, smaller than those actually in need due to the fact that policy measures quite often are not particularly generous, including in terms of eligibility conditions). Another advantage is that this is the easiest and quickest way vulnerable and energy poor consumers to be reached, which could stimulate the effectiveness of the actions. Weaknesses of this approach are that: existing political identifications are accepted uncritically; attention is not paid to the depth of energy poverty; the scope of the target group and consequently the necessary impacts are reduced, etc.

A second approach is based on addressing all consumers, including among them the vulnerable ones and those living in energy poverty. Within this approach, segmentation of consumer models deserves serious consideration. A strong side is also that it creates opportunities to outline distances and to test hypotheses about different behavioural patterns and strategies. However, it seems that in such projects, vulnerable consumers and energy poverty largely remain a side and secondary issue not addressed with the necessary attention.

A third approach – most often related to research projects – tries to identify the scale, the causes and the consequences of energy poverty. Most often the energy poverty generators are identified as low level of incomes, high price levels and housing quality in ref. with energy efficiency. Wider frameworks addressing energy poverty are also in place and further elaborated – for example, the need for comprehensive coordination of many existing policies and, respectively, actors in the field of energy poverty. Advantages of this approach include formulation of indicators and description of the situation of energy poverty and energy poor in the different EU countries. At the same time, the transformation of research results into political actions and interventions remains problematic, incl. due to the lack of sufficiently focused efforts in the field. It seems important to note as well that:

- The review of the projects under consideration shows that clear focus on vulnerable consumers and energy poverty remains problematic above all due to the lack of a clear and accepted methodology for identifying and monitoring the vulnerable consumers and energy poverty. The absence of such a definition at European level, as well as the varied and even contradictory practices in the various EU Member States, results in the absence of a common approach to addressing them;
- Additionally, vulnerable consumers and energy poor are addressed as a target group subjected to the impact of the different interventions being implemented and the question of their involvement as ‘experienced experts’, including in decision making, is addressed rarely, if at all.

#### **4.3.1.2 The different approaches outlined above reflect the different focus of the undertaken actions:**

- Most of the reviewed projects have as a basic focus providing information and advising aiming at energy saving behaviour linked with the EU strategy for saving energy; (in more details this is discussed in the next points);
- Research projects focus on explanations of energy poverty drivers; elaboration of indicators; provide forecasts for future developments; try to contribute to the understanding of the complexity of the phenomenon.
- The accumulation of knowledge on energy poverty seems to be accompanied with some kind of imbalance in the actions and interventions targeting different energy poverty generators. More concretely (although not included into the reviewed projects), there are many projects in the field of energy efficiency of homes (while the question of how far these projects address those most in need remains open); At the same time there are fewer projects related to the low incomes as an energy poverty generator and there are almost no projects related to the rising energy prices. Thus especially the link of incomes and prices - that is the purchasing power - as an energy poverty generator remains largely unaddressed.

The undertaken actions and the way (vulnerable) consumers and energy poverty are addressed have resulted into many positive outcomes, as proposed by the different projects. They could be summarized in:

- Much better informed consumers, incl. vulnerable consumers and energy poor people;
- More developed qualifications of different stakeholders and capacity building
- Better knowledge on energy poverty and vulnerable consumers;
- More informed policy proposals

Still, the question to what extent this has contributed to the decrease of energy poverty remains open. Rather it could be suggested that the reviewed EU projects have generated important premises to work in this direction. However serious efforts are necessary to transform these premises into a real energy poverty reduction.

#### **4.3.1.3 Trainings for energy information and advising – a review of the focus and approach**

There is a growing development in the field of training. The reviewed projects depict the availability of a wide range of training materials developed for different groups. Many of these training materials are aimed at specialized trainings of intermediaries that can influence vulnerable consumers/ energy poor people as a target group. Energy advisers and ambassadors are trained among professionals, social workers, etc. There is also a trend toward professionalization of the activity - examples in this direction are the development of an accreditation system and various methodological guides. Another important positive is

the search to recruit advisers/ambassadors from the target groups, as well as attempts to engage young and unemployed people.

There is considerable accumulated experience in ref. with the elaboration and implementation of different training materials and modules. They aim primarily at different stakeholders that mediate the relationship between energy suppliers and consumers. It may be useful to bring all these training modules together in order to be used in the future. For the time being, they are present on the web as part of the specific projects and sometimes disappear along with the completion of the project.

There is also a second type of training materials: - a set of guides aimed at (vulnerable) consumers, whose main purpose is to suggest ways to save energy in homes, This takes different forms: on the spot (related to home visits), by the web and/or through call centres – and presents activities for informing and advising.

Improvements of the informational flows and the better equipment of (vulnerable) consumers with knowledge on the processes (incl. with smart meters) are important premises for (vulnerable) consumers' empowerment. Still, in regard with empowerment much further steps seem very important. A necessary trend is to address vulnerable consumers and energy poor not just as target groups on which to act but as actors, 'experienced experts' in the field who could contribute to future development. In this regard a different type of trainings needs to evolve as well: for example, trainings to participate in decision taking mechanisms on energy poverty; trainings for civil participation capacity building; trainings in ref. with monitoring energy poverty generators; trainings for participatory assessments of the social impact, etc. All such activities, as far as they could be considered useful, also need training and training materials.

#### **4.3.1.4 Established networks – a review of the focus and stakeholders**

Networking is an integral part of almost all the EU projects under consideration: in fact, the reviewed projects have created and are based on some kind of networks. The range of these networks varies considerably - some are quite wide, others are quite narrow – just the partners. Still, there is a clear trend to try to engage different kinds of stakeholders – professionals, actors linked to the energy providers, social organizations, authorities at different levels (local, regional, national, EU), etc. Although, the sustainability of the created networks is not quite clear (if they act only at the time of the project or continue after that as well), it is certain that capacity has been built in that direction and that the results achieved could be useful, including by revitalizing networks created in the past.

The activities of the established networks follow the basic focus of the actions of the different reviewed EU projects. Additionally, it seems that in these networks, as a rule, consumers, especially vulnerable and energy poor consumers are seldom if at all involved. Most often these are networks of intermediary bodies, often focused on the concrete actions and not involving broader framework of activities.

The review suggests that additional added value can be sought from the established networks: for example better exchange between the different stakeholders on their field of interests; better feedback on visions and proposals, incl. from social workers and

(vulnerable) consumers. Such developments could alleviate the current gap between energy and social stakeholders and contribute to better energy poverty reduction focus.

#### **4.3.1.5 Enhancing energy saving behavioural change & strategies to involve consumers' engagement – types of actions and strategies;**

In many of the reviewed (action) projects this is a central aspect - to stimulate energy savings. In this respect, the projects present data on the outcomes and report the extent to which energy saving behaviour is achieved.

However, as a rule, this covers different consumers, but does not clearly concern or relate to vulnerable and energy poor consumers. And some projects report opposite results in ref. with vulnerable consumers and energy poor – the information and advising could lead to increased use of energy. The reason for this is the fact that many of the vulnerable and energy poor consumers could have already reached the possible limits of minimum use of energy and therefore the focus on reducing energy costs by changing behaviour is not well adapted to vulnerable consumers and energy poor people. For the same reason, projects targeting all users could hardly make significant contributions to vulnerable consumers and energy poor.

In fact, consumer behaviour research can in principle contribute to increased energy saving but it could have limited opportunities for energy poverty reduction.

At the same time, there could be opportunities to increase project efficiency and reduce energy poverty if research into consumer behaviour of vulnerable consumers and energy poor is deepened, including by identifying different groups among them and checking the energy poverty gap. Such a research could help to understand whether these groups of consumers could actually profit from energy behavioural changes or other types of measures to reduce energy poverty are needed. This is important in order to alleviate the risk some energy poverty reduction projects to adapt energy poor to the condition of the main factors of poverty, and thus to poverty itself, instead to seek changes in the factors and to mitigate poverty. In principle, it could be suggested that vulnerable consumers and energy poor people could hardly take advantage of energy saving and that there is some limit linked to energy saving rational behaviour and to the ability to cut costs to get out of the state of energy poverty. However, this may not apply to all groups of vulnerable consumers and energy poor.

Additionally, the experience in energy saving behavioural changes accumulated by different EU projects could be very useful to contribute to the necessary assessments of minimum thresholds for energy and thus to support the process of elaborating methodologies for adequate minimum income schemes.

#### **4.3.1.6 Typologies of policy proposals for a better protection of vulnerable consumers & against energy poverty - types of areas and focus of policy proposals;**

There are a wide variety of policy recommendations proposed in the different EU projects under consideration. Most of the reviewed EU projects include directly or indirectly some

kind of recommendations usually in their sphere of activities and are often linked with visions for possible improvements in the undertaken activities. In summary these recommendations could be classified into several basic groups:

- Recommendations concerning improved information and advanced informative services for consumers: Many projects provide proposals and lessons learned how to better equip consumers with the necessary knowledge for their everyday consumption patterns and to better follow the information from the energy providers. These recommendations are linked as well to proposals for higher attention to qualified trainings in the field and building capacity in networks;
- Recommendations for a specific focus on vulnerable consumers and better understanding of energy poverty concept in its complexity: “A common understanding of the concept of energy poverty will help MS. States, civil society and industry to start a dialogue about energy poverty and how to tackle it.”; “Need to establish energy poverty as an issue that demands tailor-made policies and measures at local, national, and EU level.”; “A consistent diagnosis”;
- Recommendations concerning careful monitoring of developments and their impact on energy poverty: “First, EU policies to consider the differential impact that the on-going global economic and Euro area crisis is having on welfare levels across member states, with a particular emphasis on the effect of austerity measures; Second, efforts to liberalize and privatize the EU’s energy sector need to take into account domestic energy affordability and access criteria, & of the energy poverty risks that the transition to a low-carbon EU poses in terms of increasingly higher energy prices.”; “Decision makers should pay ample attention to equity aspect of the expected future price increase that will affect certain households more severely and could widen the existing “energy gap” and inequality among households.”

### 4.3.2 Summary

Summarizing, the review of the selected EU projects depicts clear gaps as far as energy poverty reduction is concerned (between researches and interventions; social and energy stakeholders; consumer protection measures and measures aimed to adapt behaviour; informing and empowering consumers, etc.). However the review suggests as well many different opportunities to fill in these gaps on the basis of accumulated experience.

# 5 Replicable Best Practice National and European Measures

## 5.1 Methodology

### 5.1.1 Methodology of Reviewing National Initiatives

In reviewing National initiatives relevant to the work of the ASSIST project, the following criteria were used.

- Projects that are either National or Regional (localised) within a country
- Projects that are targeted to households/families energy consumption
- Project that address in some way energy poverty and or vulnerable consumers.
- Projects that are linked in some way to the ASSIST activities and envisaged outputs.
- Most of the projects considered were recent but older projects that may be useful for Assist could be included as well.
- Projects that could provide or suggest some 'good practices'.
- Important publications in the field of Assist are regarded as projects.

### 5.1.2 Methodology of Reviewing EU Initiatives

In reviewing European projects relevant to the work of the ASSIST initiative, the following criteria were used.

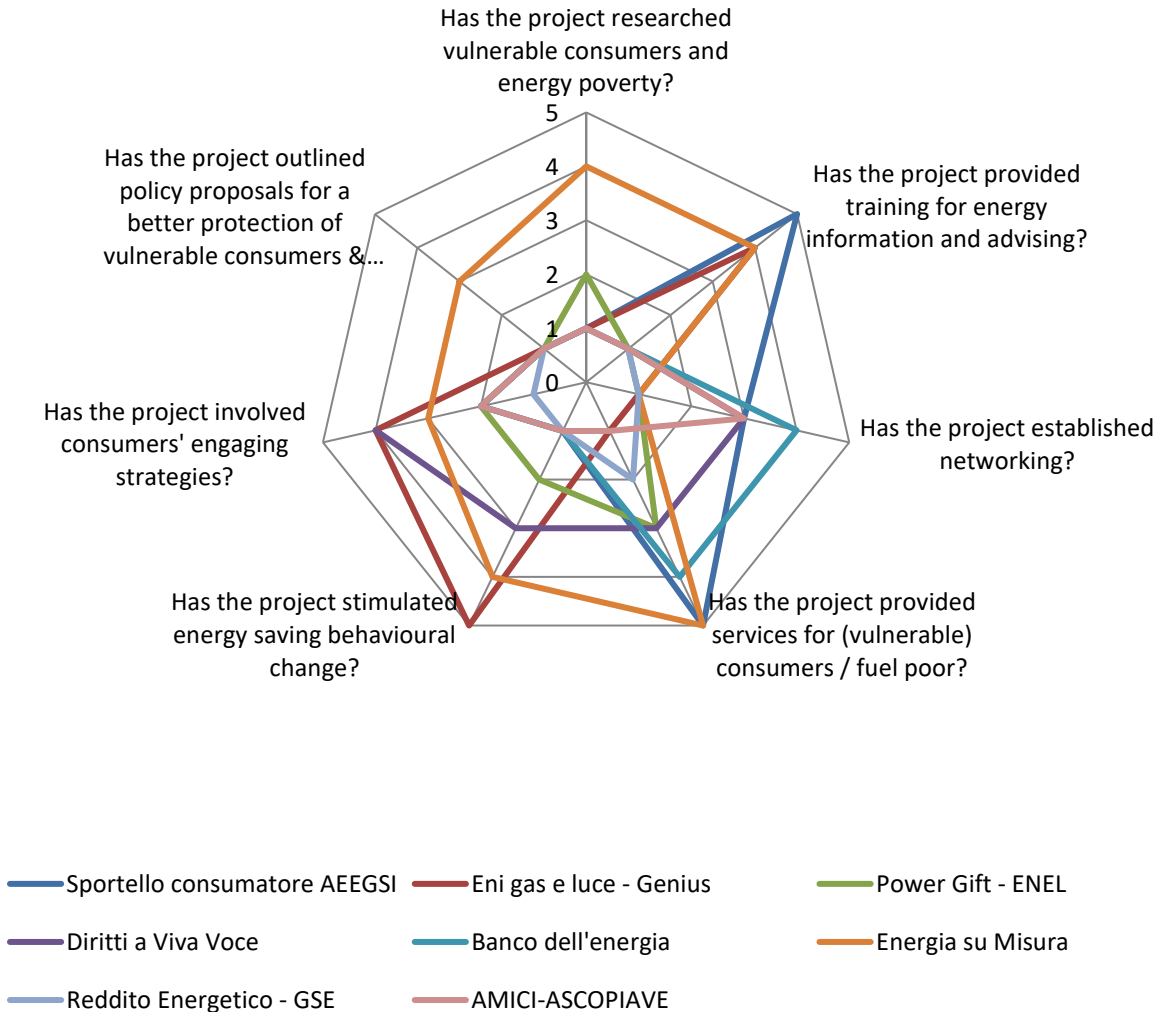
- Projects that include at least 2 EU member states.
- Projects that are targeted to households/families energy consumption
- Project that address in some way energy poverty and or vulnerable consumers.
- Projects that are linked in some way to the ASSIST activities and envisaged outputs.
- Most of the projects considered were recent but older projects that may be useful for Assist could be included as well.
- Projects that could provide or suggest some 'good practices'.
- Important publications in the field of Assist are regarded as projects.

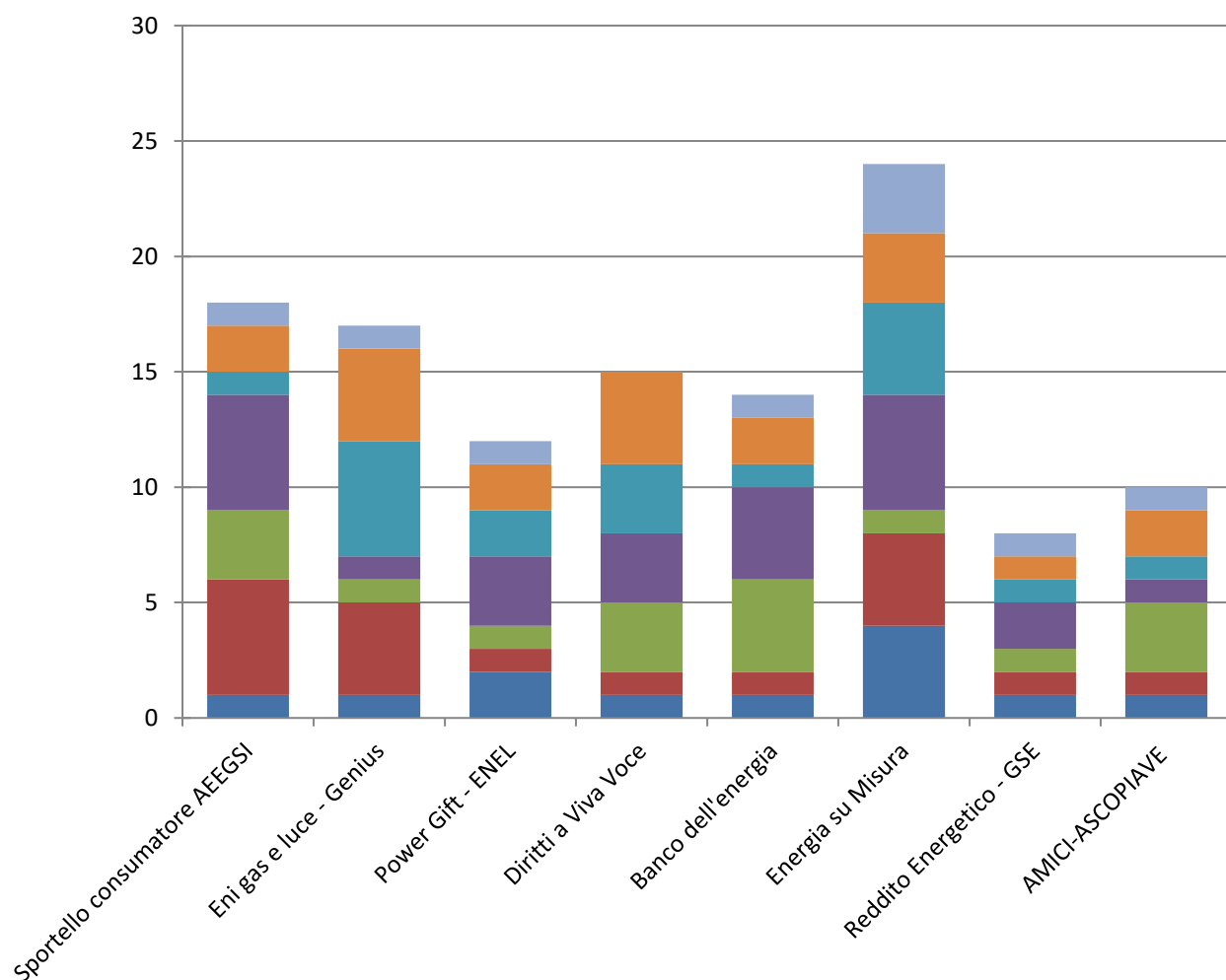
## 5.2 National Initiatives: Best Replicable Practice

Using the information collected during Deliverable 2.2 by all partner countries, the data was analysed through the creation of radar and bar charts in order to identify areas of best replicable practice. This information was then disseminated to all partner countries for consideration.



# 5.2.1 Italy National Initiatives





■ Has the project outlined policy proposals for a better protection of vulnerable consumers & against energy poverty?

■ Has the project involved consumers' engaging strategies?

■ Has the project stimulated energy saving behavioural change?

■ Has the project provided services for (vulnerable) consumers / fuel poor?

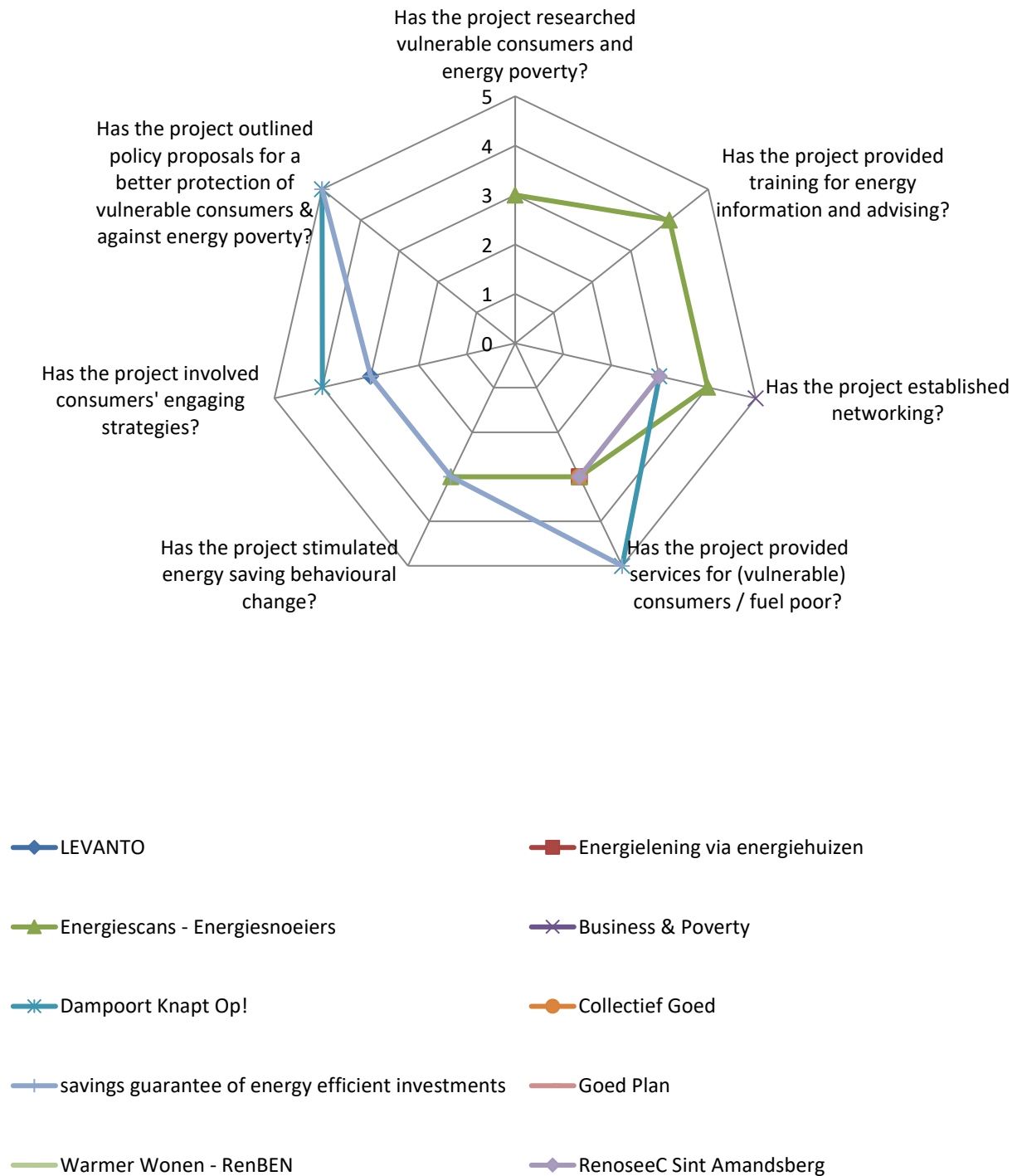
■ Has the project established networking?

■ Has the project provided training for energy information and advising?

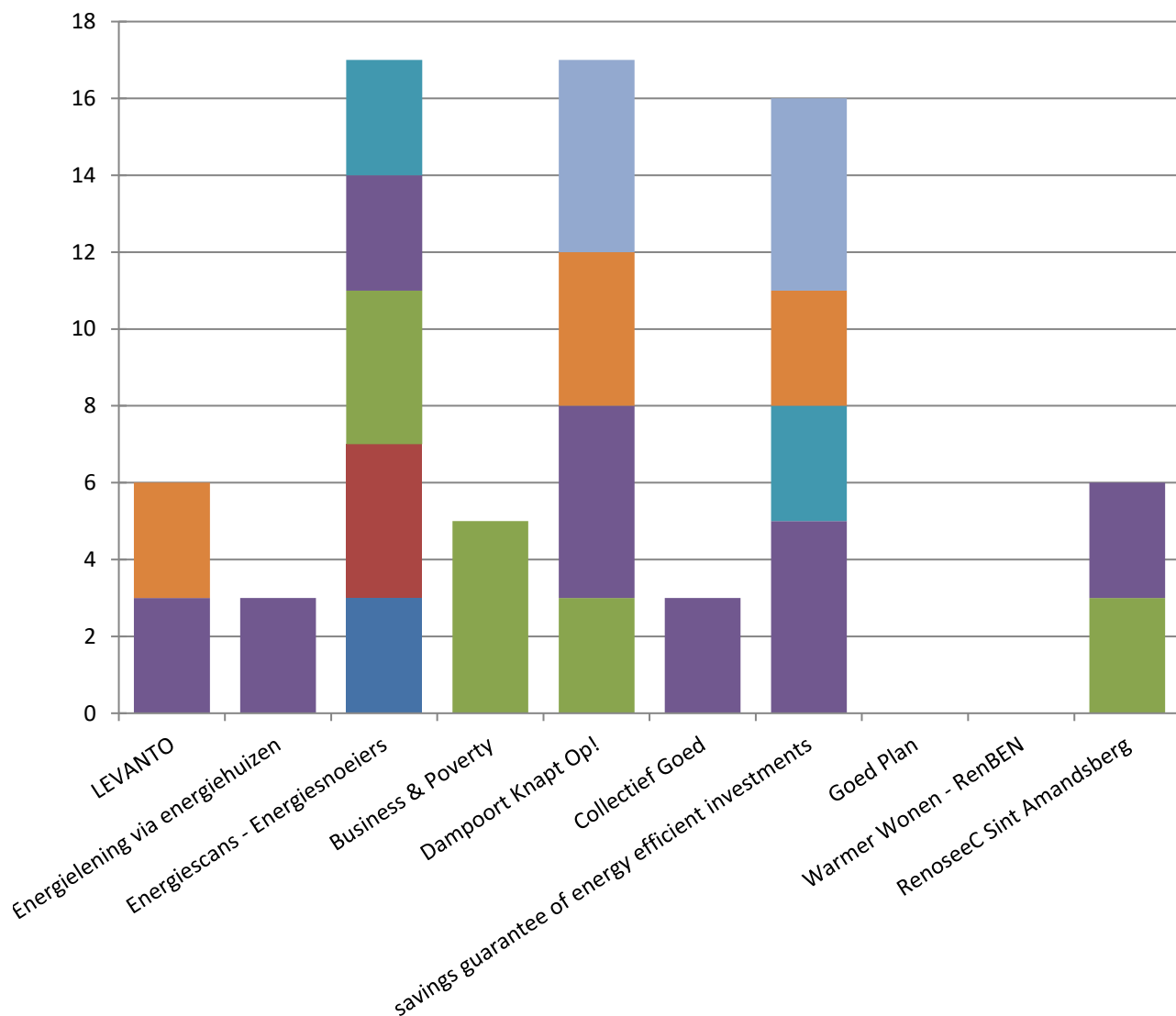
■ Has the project researched vulnerable consumers and energy poverty?

## 5.2.2

### 5.2.3 Belgium National Initiatives



### 5.2.4



■ Has the project outlined policy proposals for a better protection of vulnerable consumers & against energy poverty?

■ Has the project involved consumers' engaging strategies?

■ Has the project stimulated energy saving behavioural change?

■ Has the project provided services for (vulnerable) consumers / fuel poor?

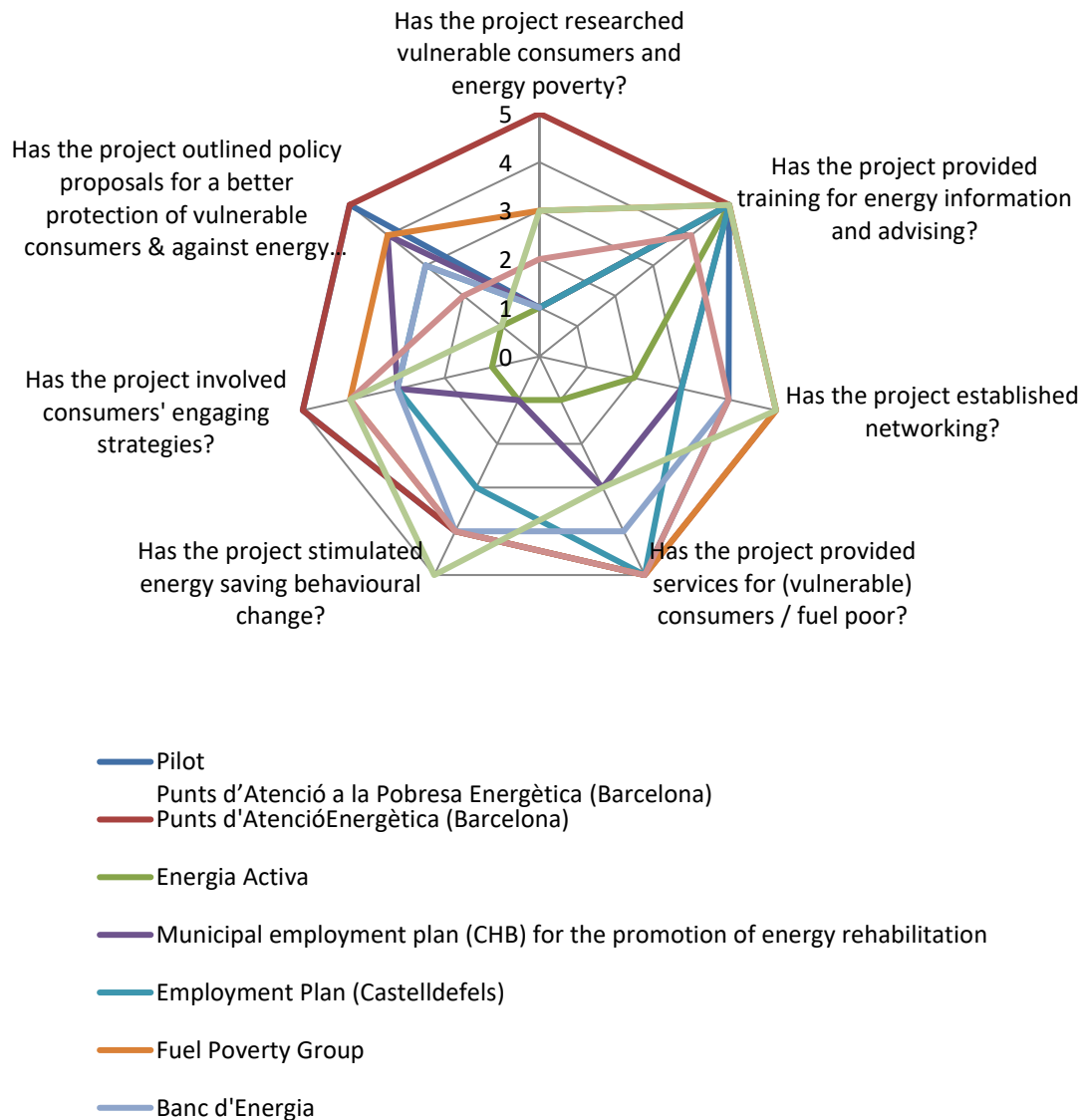
■ Has the project established networking?

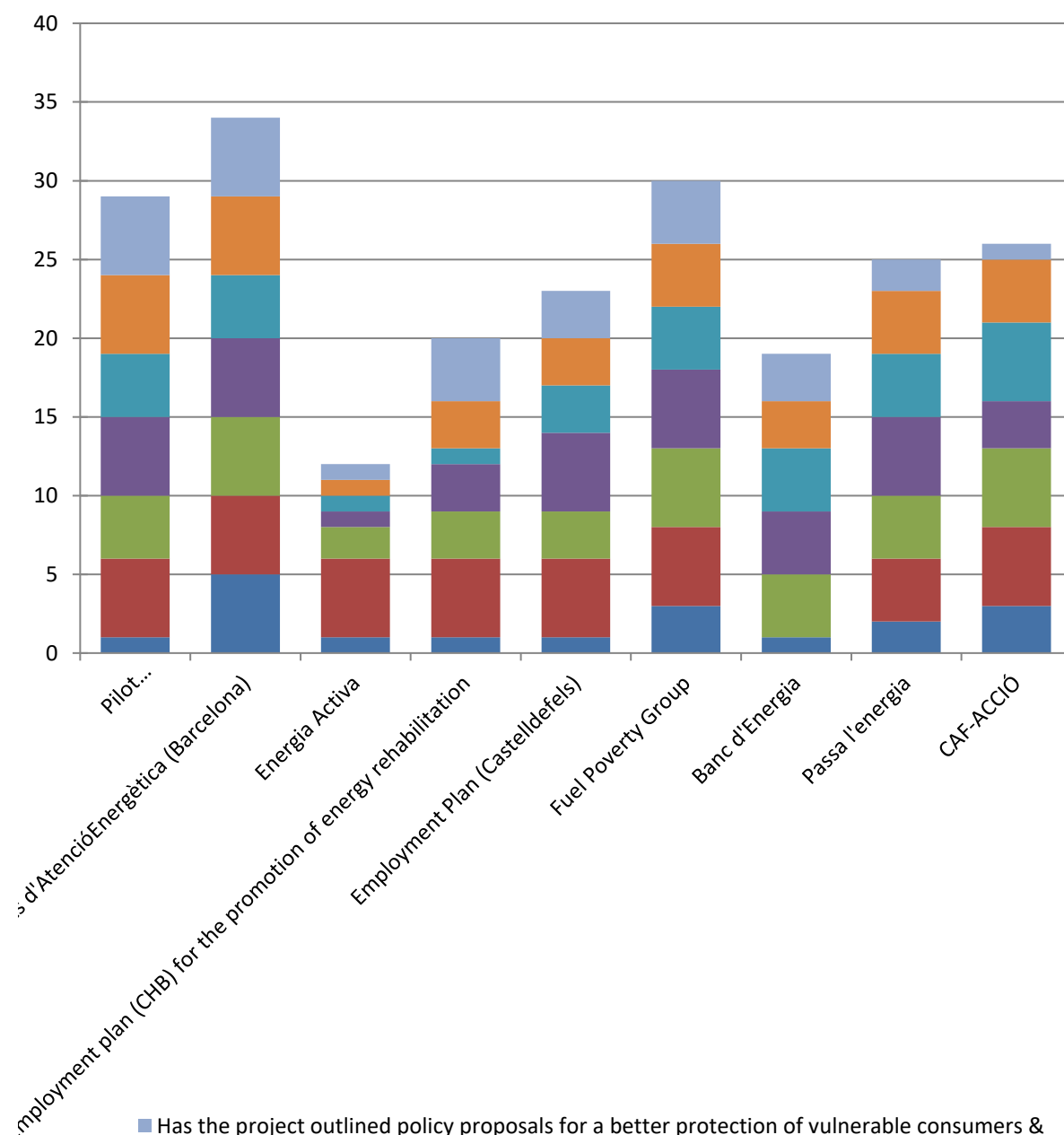
■ Has the project provided training for energy information and advising?

■ Has the project researched vulnerable consumers and energy poverty?

## 5.2.5 Spain National Initiatives

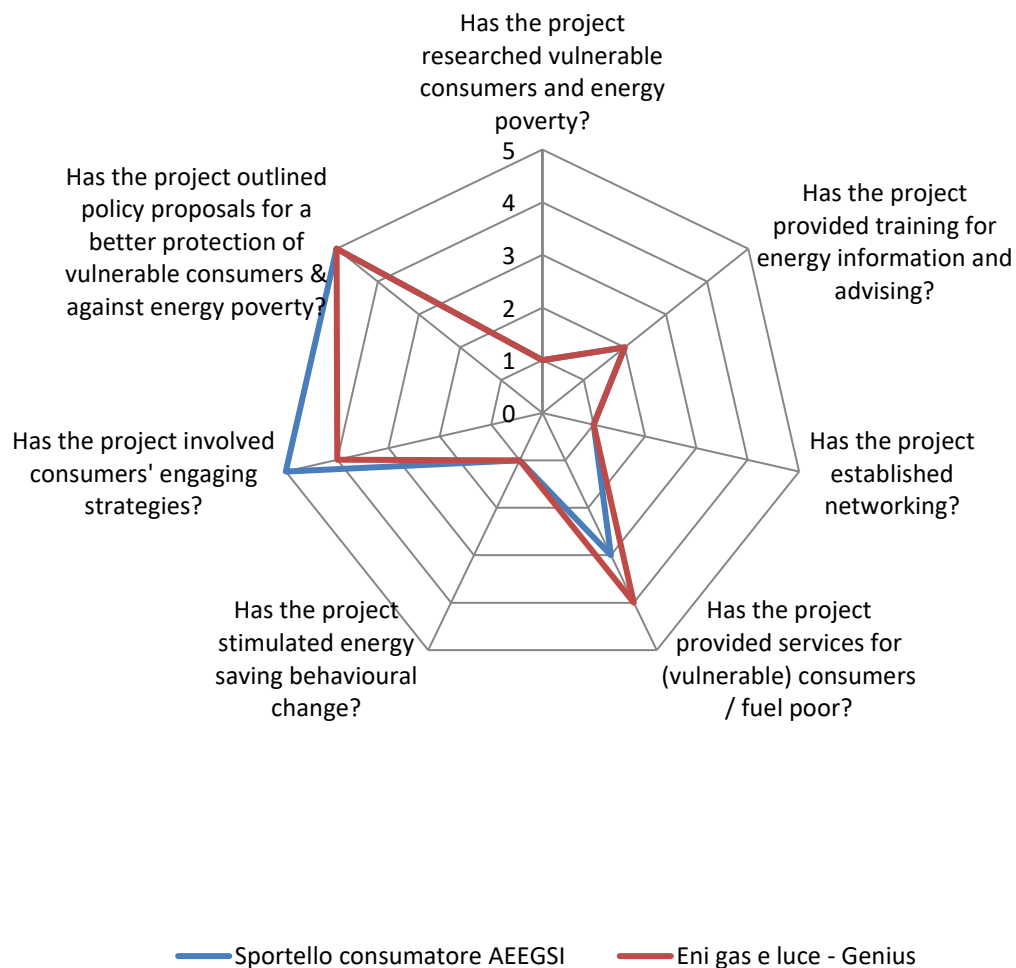
### 5.2.6





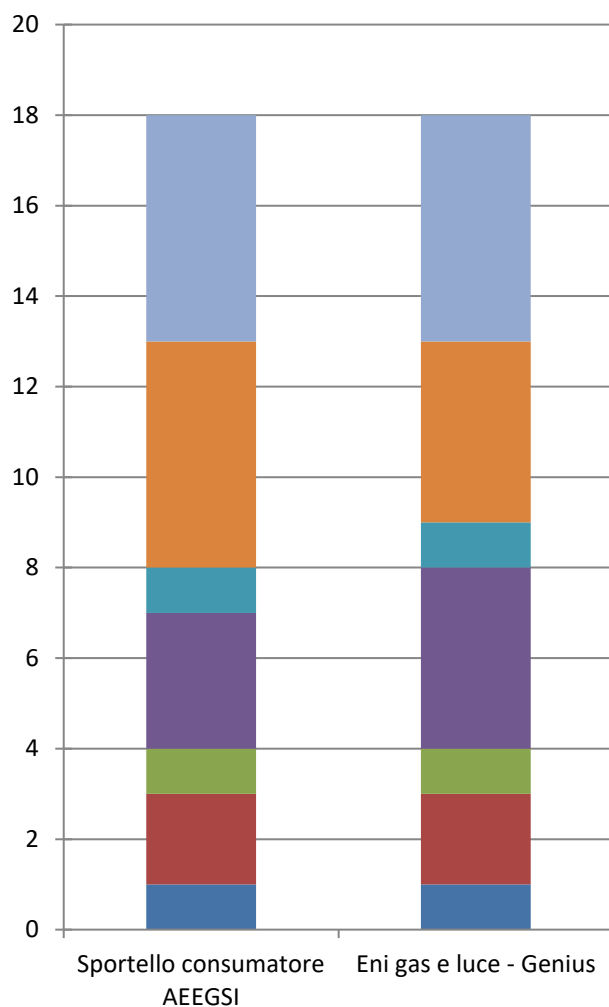
- Has the project outlined policy proposals for a better protection of vulnerable consumers & against energy poverty?
- Has the project involved consumers' engaging strategies?
- Has the project stimulated energy saving behavioural change?
- Has the project provided services for (vulnerable) consumers / fuel poor?
- Has the project established networking?
- Has the project provided training for energy information and advising?
- Has the project researched vulnerable consumers and energy poverty?

# 5.2.7Poland National Initiatives



## 5.2.8





- Has the project outlined policy proposals for a better protection of vulnerable consumers & against energy poverty?
- Has the project involved consumers' engaging strategies?
- Has the project stimulated energy saving behavioural change?
- Has the project provided services for (vulnerable) consumers / fuel poor?
- Has the project established networking?
- Has the project provided training for energy information and advising?
- Has the project researched vulnerable consumers and energy poverty?

## 5.2.9

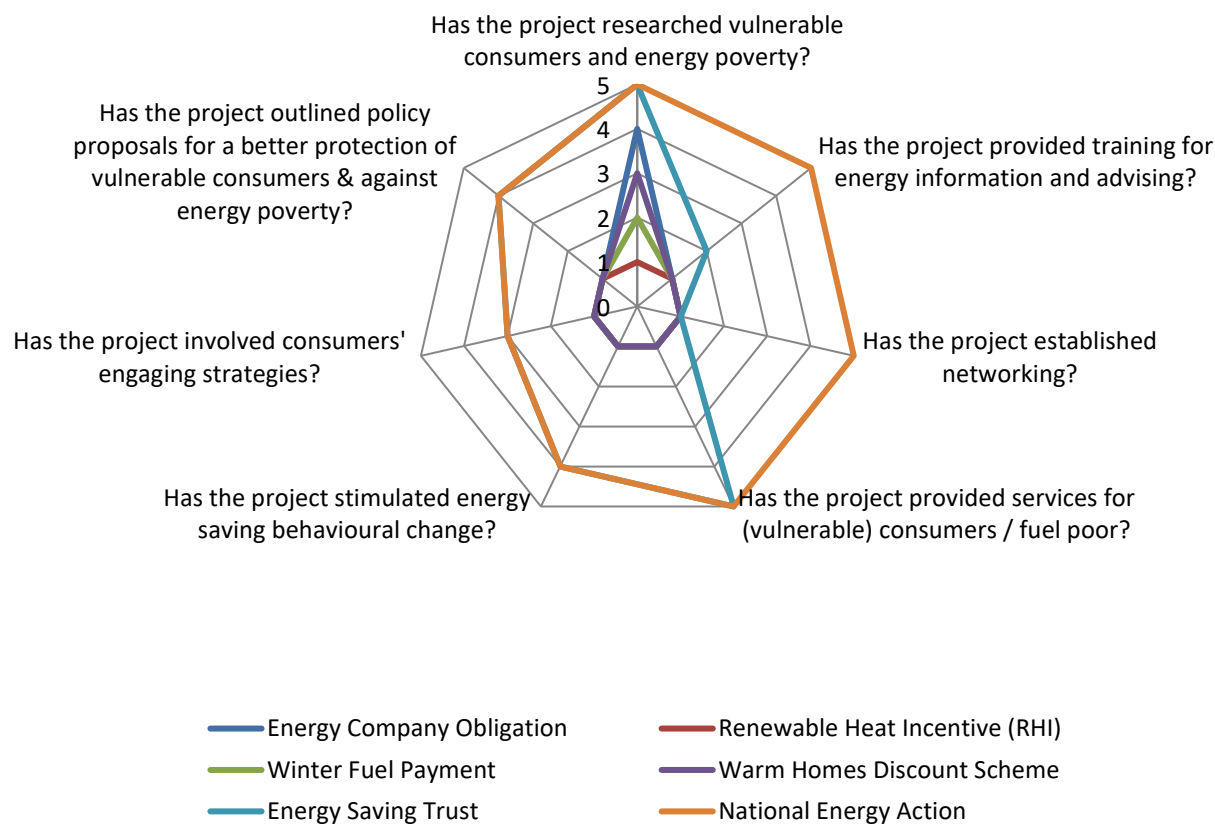
### 5.2.10 Finland National Initiatives

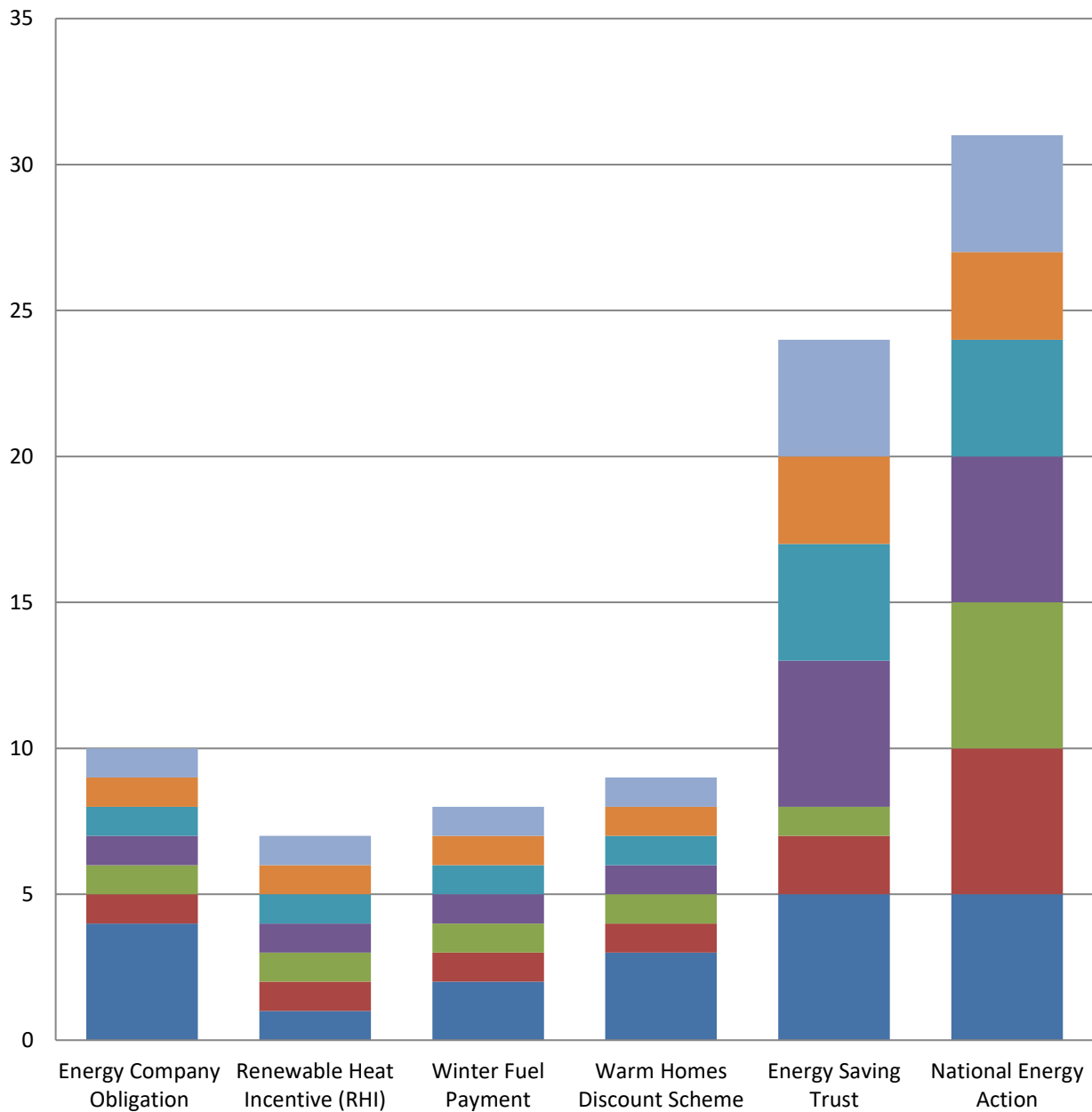
Finland does not have national initiatives that are targeted at vulnerable consumers or energy poor. Several initiatives and actions to improve household energy efficiency are in place.

Finland has national energy efficiency advising services for consumers, that are provided by national energy agency, Motiva. Motiva is government funded agency that gives consumer advice through dissemination done mostly online. Motiva also facilitates the exchange of experiences and provides materials and training for local Energy Advisors around Finland. Previously (2012-2015) Government funded also the regional energy advisors through Motiva. Currently all the regional energy agencies are independent, and Motiva no longer coordinates their work, as the government no longer funds the regional services. The local energy agencies/advisors are currently on different kind of project funding. Project are focused on topics such as renewable energy, transport and energy efficiency -depending on the projects for which they are directly funded at any time. Motiva has more long-term advisory campaigns such as “Energiatohokaskoti” (energy efficient home) that has been ongoing since 2005 or “Energiasäästöviikko” (Energy saving week) that is yearly campaign organised week 41. The Government is planning to increase financing on Energy advisory services so that the local energy advisory services will receive new funding for targeted projects around Finland. The designing of the local projects, which are to be implemented during the next couple of years, is currently on the way.

Energy Efficiency of housing is improved with strict building standards, but also with campaigns and projects such as “Energiahukka” -campaign that challenged the Finnish housing companies to reduce energy consumption by simple means. Energiahukka is a joint venture between the Ministry of the Environment and the real estate and construction industry, and it lasted for 2017.

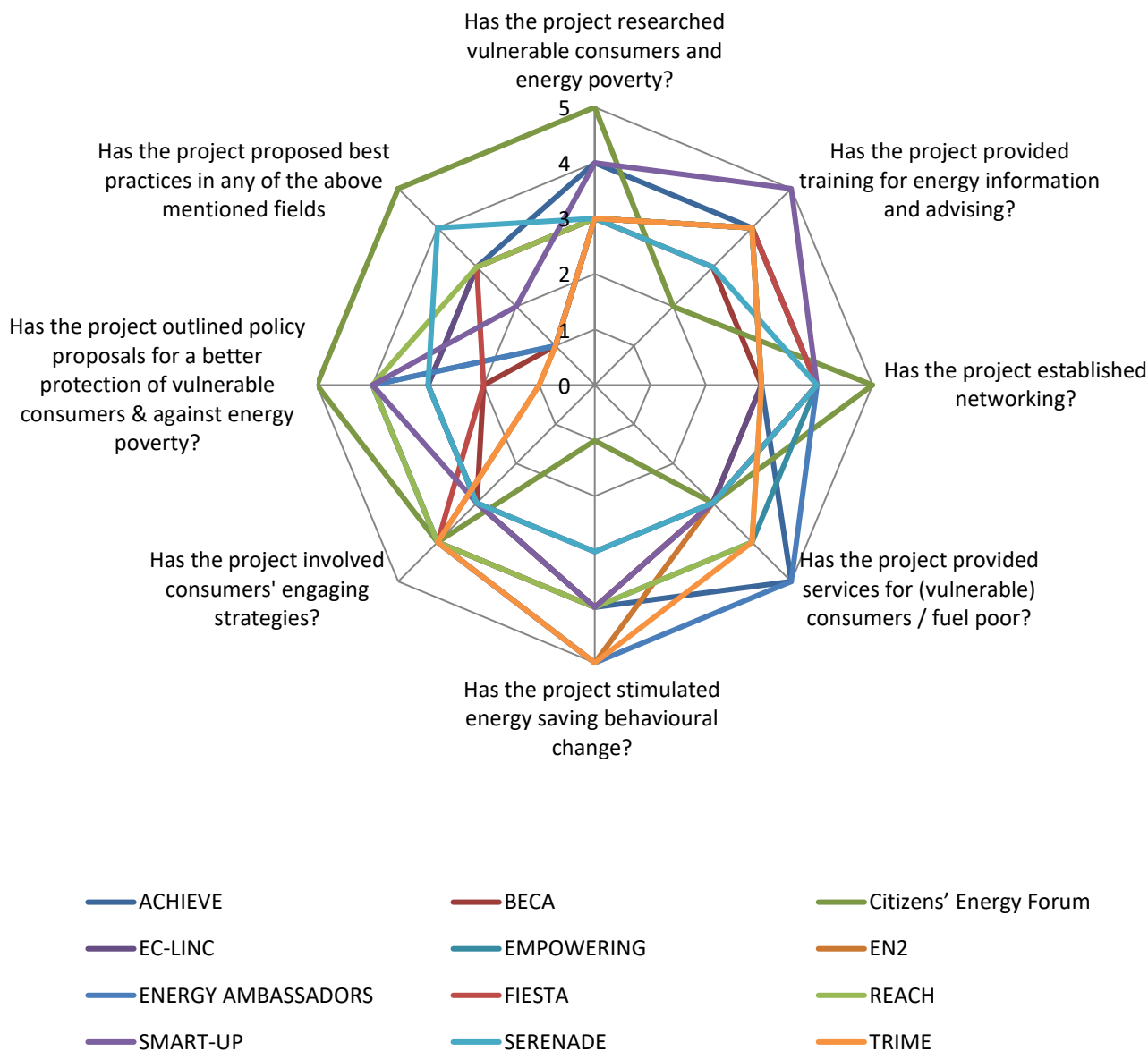
# 5.2.11 UK National Initiatives

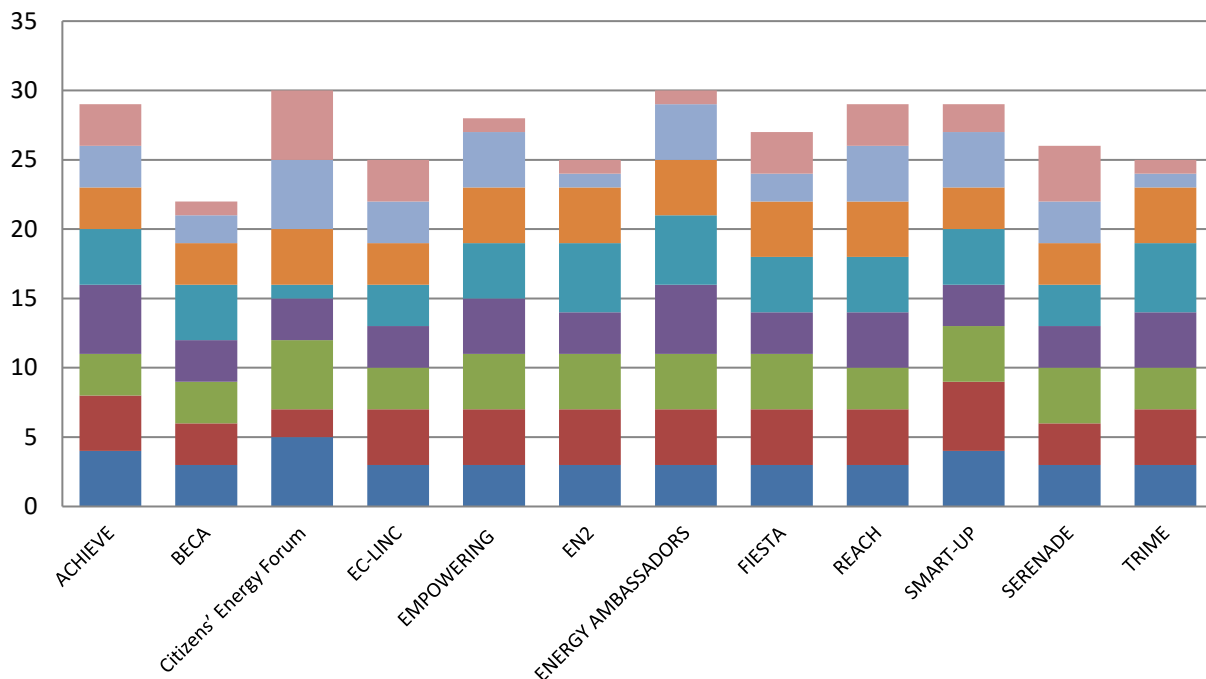




- Has the project outlined policy proposals for a better protection of vulnerable consumers & against energy poverty?
- Has the project involved consumers' engaging strategies?
- Has the project stimulated energy saving behavioural change?
- Has the project provided services for (vulnerable) consumers / fuel poor?
- Has the project established networking?
- Has the project provided training for energy information and advising?
- Has the project researched vulnerable consumers and energy poverty?

# 5.3 EU Initiatives: Best Replicable Practice





- Has the project proposed best practices in any of the above mentioned fields
- Has the project outlined policy proposals for a better protection of vulnerable consumers & against energy poverty?
- Has the project involved consumers' engaging strategies?
- Has the project stimulated energy saving behavioural change?
- Has the project provided services for (vulnerable) consumers / fuel poor?
- Has the project established networking?
- Has the project provided training for energy information and advising?

## 6 European Market Survey on Vulnerable Consumer needs

### 6.1 Analysis Stakeholder Surveys

The aim of the qualitative survey for stakeholders is to:

1. Engage stakeholders in the project. The interview is a way to market the project, disseminate information about the project, and engage stakeholders in the project. This could involve using the interview as an opportunity to recruit stakeholders to the Steering Committee.

2. Assess current provision. The interview will provide the opportunity to discuss current work that is being undertaken with regard to energy poverty and specifically on support for vulnerable consumers. The discussion should include the nature of provision and comments evaluating the provision.
3. Guidance. The interview may help to inform the planning of activities for volunteers.

## **6.1.1 Italy Stakeholder Surveys**

What are the main gaps and issues surrounding energy poverty and vulnerable citizens?

### **Definition**

The lack of a proper definition for vulnerable consumers and energy poverty create a puzzling scenario for the stakeholders. Even if there are academic papers and studies, they can't replace a nationally adopted definition. This issue is important because of the multilevel peculiarity of energy poverty, embracing several themes and thus requiring different actions. Among those mentioned by the stakeholders: energetic requalification of buildings, income support; training and information. Currently, it appears that energy poverty cannot be addressed as a specific issue but simply be included in the fight against overall economic poverty. However, with an absence of definition comes an absence of result: it's extremely complicated to measure the impact of any action if the target is not even identified.

### **Financial instruments**

Another relevant issue is the availability of a single instrument to fight energy poverty, the social bonus for electricity and gas, which is actually targeted at consumers with specific features (income, more than 3 dependent children, and serious health condition - in the case of disability bonus). Connected to the lack of definition, there is complexity in measuring the impact: it is hard to understand if this instrument is really tackling energy poverty. According to the Authority, only 34% of the potential target obtains the social bonus: so the majority of consumers entitled do not enjoy the discount they should have.

Furthermore, there are consumers off grid, so they are automatically excluded from the possibility to access to the bonus (for natural gas, for instance), and an high percentage of them could actually be in energy poverty.

### **Trust**

Considering the complexity of the energy markets, stakeholders raised the issue of building consumer trust. This is a twofold problem: a strong lack of trust in energy operators and their contact centres - who have direct contacts with consumers and the problem of understanding energy dynamics. Therefore, the key issue is how to engage consumers directly in the initiatives, and maintain frequent contact with them, so as to help vulnerable consumers to understand the possibility of enjoying a social bonus.

### **Costs**

Stakeholders referred to costs in different ways. Someone is concerned about the bill in the current economic context, with high level of youth unemployment, higher living costs.



Moreover, decarbonisation incentives fall on the bills, and thus could worsen the situation for energy poor consumers. Other stakeholders are also considering the problem of the quality of housing and the efficiency of the building. Energy efficiency measures are expensive and out of reach for vulnerable consumers, thus again leaving them out of the real target for most of the actions.

### **Social and psychological barriers**

It is not rare to find consumers with a lack of awareness regarding their condition of vulnerability, both in terms of a lack of information and a public shaming problem. Indeed, people perceive a high risk of stigmatization due to the fact that they could be familiar with the offices and the helpdesk employees. This diminishes the possibility of contact and help from social workers, who are not aware of the situations of many vulnerable consumers.

### **What are the initiatives/gaps/activities that need to be addressed?**

Improving policy: There should be an effort on several levels to fill in the gaps at a policy level. A methodology must be identified, in order to focus on what should be measured and how to do it. Moreover, policies on energy poverty appear to the stakeholders as spot activities, unrelated with each other, and without a clear target in their design. Thus, there is the need for a strategy (which is now under scrutiny at Government level with the National Energy Strategy) to coordinate activities and make it clear to the different actors how this problem should be addressed.

Even if there is a need for European coherency, stakeholders emphasized that every country has its own energy poverty characteristics. Thus, different strategies must be designed for different countries: it's a geographically correlated issue. Targeting and engaging a vulnerable consumer is considered one of the biggest problems to targeting some consumers out of any support scheme. In order to ensure no-one falls through the net, municipalities must be engaged: they are the closest level of authority to the consumer, and they can have a better understanding of both demographic and geographic issues. Stakeholders considered municipalities and their agents as the tool that should be engaged and specifically trained, or at least involved in the ASSIST project. Stakeholders agreed also on the importance of engaging operators from the social level: in previous projects they have found it hard to involve them. Energy poverty does not seem to be considered as relevant for social stakeholders, thus contributing to the failure of spreading information about the social bonus.

### **What is already being done?**

Most of the activities being undertaken are about networking, in order to support vulnerable customers. Projects typically regard support in order to get the social bonus: information, requirements, procedures, so that consumers within the reach of this instrument are able to benefit from it. A stakeholder has undertaken a project - Diritti a Viva Voce - together with other association, to create a network of energy helpdesk (sportelli), in order to provide information and support to domestic consumers nationwide.

A stakeholder has carried on a project on energy saving for social housing, with several problems on engaging consumers. A supplier has established a non-profit organization, with

the aim of creating full recovery paths, including the distribution of essential goods and the payment of urgent expenses such as energy bills (of any supplier).

Given the absence of definition and measurement, some stakeholders have published economic research on energy poverty, in order to contribute to identifying a nationally accepted definition.

### **How can ASSIST align with the policies and activities of stakeholders?**

Stakeholders would like to share experiences and define best practices, in order to overcome some difficulties they have found in the past. Some organisations would like to have some of their personnel trained in order to support vulnerable consumers.

Most of them have emphasized the need of creating connection between organisations so that practices can be shared and used on a wider level.

### **What would stakeholders like to see from ASSIST?**

- Help vulnerable consumers understand the new liberalized market
- Real engagement of vulnerable consumers
- Increase consumers trust in the market
- Support and engage Energy helpdesks in municipalities and social entities with training courses
- Activating competences at a local level, where the relationship with consumers can be stronger
- Outreach for hidden vulnerable consumers
- Help boost the idea that efficiency is a powerful tool to tackle energy poverty
- Set up a permanent network of advisors
- Influence the political process on the importance of a specific advisor for vulnerability, poverty and efficiency
- Obtain a common EU definition
- Obtain standardization at EU level and share best practices
- Frame energy poverty within the poverty policies

## **6.1.2 Belgium Stakeholder Surveys**

**What are the main gaps and issues surrounding energy poverty and vulnerable citizens?**

### **Poverty/energy poverty**

Energy poverty is a consequence of living in poverty more generally which means living in poor quality dwellings often with a high energy demand.

There are a number of structural reasons for energy poverty problems in Flanders: poor build quality (especially those buildings on the market for people with low incomes), high share of vulnerable customers on the rental market (with split incentive problems: owners have to invest in energy efficiency measures, while the tenants enjoy the benefits of those investments, and generally cannot afford a higher rental price if the owner decides to recoup the energy-efficiency investment).

About 1 million dwellings in Flanders do not comply with the minimum standards of the residential code. For most of these houses, minor adjustments are required, but for about 350.000 the problems are structural (e.g. moisture problems). Often it would be better to demolish these existing buildings and build new properties (rather than investing in renovation measures). Most vulnerable customers live in this type of property. Other (structural) problems have to be addressed more urgently than energy-related investments.

Most vulnerable customers are renting an apartment or a house of poor quality. In addition, in Flanders the private rental market is dominated by small-scale owners (i.e. owners having one or a few properties on the rental market). Compared to a situation where rental dwellings are owned by big corporations this makes it more difficult to deal with structural improvement measures in the Flemish rental market.

Poor households generally have difficulties paying monthly bills for numerous items (e.g. rent, telecommunications, food, transport, etc.). One should first understand how and why these households decide on which bills to pay first. For instance, the threat of disconnection is higher for telephone than for energy, since in Flanders there is the system of the social energy provider of last resort (i.e. the DSO). This system therefore tends to work in a counterproductive way: because the vulnerable customers know that they will not be immediately disconnected from the electricity or gas grid, when faced with budget constraints they often decide to pay the other bills first.

## **Energy costs**

Over the last few years, the average residential energy bill has been increasing. This is for a number of reasons: the transition to renewable electricity is financed via the electricity bill, the system of free kWh has been abolished, etc.

There has also been the tendency to increase the fixed part of the electricity bill (e.g. a yearly fixed surcharge on the electricity bill to pay for the debts incurred by subsidising green electricity production. Recent proposals suggest moving towards a capacity-based distribution tariff), where energy bills should be related to the amount of energy you consume (so that energy savings also pay off). Increasing the fixed part of the energy bill is generally detrimental to vulnerable customers (who generally consume less energy).

## **Energy poverty policy**

The financial instruments available for energy-efficiency improvements are not taken up by vulnerable customers because of numerous barriers (e.g. administrative burdens, upfront expenditure needed, etc.).

Energy poverty policy in Flanders is predominantly curative, but can also be counterproductive, such as:

- there is a social safety net (the DSO as energy provider of last resort), but the tariff charged by the DSO is based on the average of commercial tariffs available in Flanders so the customers could in fact save money if he/she would choose the cheapest option on the market;
- the installation of a budget meter (in case the customer has debts with the DSO) stigmatizes the customers and acts as a further barrier for lifting these customers out of the poverty trap.

Energy poverty policy is the responsibility of the minister of energy and energy administration and other institutions (e.g. Flemish energy agency, the regulator VREG, the DSOs). Each of these organisations has specific tasks and responsibilities, and therefore also tend to operate in isolation.

There is no integrated policy view on energy poverty as part of the general poverty problem. Ideally, energy poverty should be addressed by the ministry of housing.

Energy poverty policy is the subject of an ideological battle in Flanders. On the one hand, there are those who believe that measures to alleviate energy poverty (e.g. zero interest on energy loans for efficiency improvements) should be an integral part of the regular economy (i.e. commercial banks providing the loans); on the other hand there are those who believe that these measures should be part of social policy. As it is now, energy poverty policy is part of social policy (e.g. energy houses providing the zero-interest energy loans, free energy scans provided by social economy organisations), but there are proposals circulating to cut back the subsidies to the social sector for energy poverty alleviation. Also, DNBs in Flanders are under pressure to focus exclusively on core activities (i.e. managing the distribution grid).

### **Existing system of energy audits**

The existing system of energy scans provided by energy advisors (energiesnoeiers, cf. infra) working for social economy organisations has the advantage of being very accessible to the target group of vulnerable customers. However, currently the effect on energy savings is limited because the energy audit only rarely leads to energy-efficiency investments.

Regarding the system of energy audit, the energy efficiency organisations are required now to work with target groups of vulnerable customers. Some of these targets groups (e.g. customers at risk of being disconnected from the grid because they refuse to install a budget meter) are very difficult to reach even though an energy audit and energy saving advice could be highly beneficial to them.

Because of the focus on directing energy audits at vulnerable customers, more effort needs to be put into each individual energy review. This means that fewer audits are performed per energy advisor per year (-25% over the years), leading to less income since the energy efficiency organisations are paid per energy audit;

The work of the energy advisor is challenging because of the poor quality of information available at the start of the audit (e.g. self-reported energy consumption) and the constantly changing (complex) system of energy efficiency premiums.

#### Energy advice for vulnerable customers

Policy makers are increasingly stressing that energy scans should lead to energy efficiency investments. Even though structural improvements are indeed required in most of the cases, they are often unrealistic given the barriers for vulnerable customers. These barriers can be addressed by...

- Directing more financial resources from the government budget to energy efficiency premiums for vulnerable customers;
- Ensuring a more intensive follow-up of energy efficiency renovations for customers in vulnerable situations;
- About 80% of energy audits are a one-off activity – i.e. one home visit, customers receiving a more or less standard report after the visit. Customers can only qualify for a follow-up visit based on very rigid criteria. It would be much better if all energy scans would be followed up over time (e.g. 4 separate visits, from first assessment to the actual implementation of recommended measures) and be much more targeted to specific customer situations/ requirements (e.g. practical tips on working with a budget meter).

Some of the target groups for free energy audits are known to the DNB (e.g. customers with a budget meter). In principle, candidates for an energy audit can be drawn from address lists available to the DNB, but this cold procedure is not very successful. It is better that vulnerable customers are guided towards the energy advisor to receive a free energy audit by intermediaries who are active in the field such as social workers, energy poverty organisations, or local social welfare organisations. Such intermediaries are more able to build up a relationship of trust with vulnerable customers, and this facilitates the interaction with the energy advisor. However, this approach is more resource-intensive.

#### Policy-related

The problem is mainly one of having sufficient resources for (energy) poverty policy:

- Constructing more social dwellings;

Targeting the system of energy efficiency premiums much more, to vulnerable customers and ensuring the necessary follow-up in the implementation of energy-efficiency measures. Encouraging structural investments in better housing stock (especially in rental market).

The Flemish government has put forward ambitious long-term targets for the building stock. By 2050, 2.7 million dwellings have to be renovated to a low-energy building standard. About 200 to 300.000 of these dwellings are on the rental market. It's especially challenging to encourage deep renovations in the rental market.

Avoiding the purely curative focus of energy poverty policy. E.g. the house visits in the context of the energy audits should be broadened to visits to assess the living conditions of

the vulnerable households in question, and giving tailored advice, possible solutions and follow-up if needed to improve the living conditions. This requires a close collaboration between different actors working in the field (e.g. energy advisors and social workers employed by local social welfare organisations).

Financing renovations in the social housing sector;

Creating the political will to address energy poverty;

Lowering the taxation level on energy from 21% to 6% (at least for vulnerable customers);

Involving vulnerable customers in positive projects that show that the energy transition can also be an opportunity for them.

For many local (especially in the small communities) OCMWs (local social welfare organisations), energy poverty is not a priority. In the big cities in Flanders energy poverty is a priority, but even there outreach to vulnerable customers depends on the number of social workers devoted to the issue.

### **What is already being done?**

Energy advice for vulnerable customers:

KOMOSIE (social economy umbrella organisation) coordinates all of the working of 29 organisations of energy advisors (energiesnoeiërs, home energy advisor organisations working in the social economy). 20 of these organisations perform energy audits, 9 organisations are mainly concerned with implementing social home improvement actions. The fact that the employees of these organisations are recruited from people in vulnerable situations adds to their effectiveness: they can easily gain the trust of vulnerable customers. In general, the barriers during the initial contact stages (e.g. shame etc.) are lower.

About 20.000 energy audits are performed on a yearly basis. There are 6 target groups that qualify for receiving a free energy audit (e.g. customers with a social tariff, customers with a budget meter, customers who rent at a price below a certain threshold value, customers in debt mediation who are at risk of being disconnected etc.).

In 2016, 650 social home insulation projects were implemented targeted at the rental market (home owners renting dwellings to vulnerable households - these home owners require a specific targeted approach because they are usually very reluctant to improve their properties).

Comment on effectiveness: There is no official data regarding the energy savings realised by the energy audits. A recent evaluation however found out that on average only 3,5% of the energy audits led to investments in energy-saving (insulation of roofs or walls, double glazing, and condensing boilers).

OCMWs (local social welfare organisations) are also active in the field of energy poverty. They perform many activities, e.g. organising a helpdesk, supporting people in the management of their debts (including energy debts), looking for adequate housing opportunities, etc.



### **Responsibilities of the DSOs:**

- Working together with other parties (e.g. public welfare organisations (OCMWs), poverty organisations, etc.) to push back energy poverty.
- Giving advice on rational energy use to all vulnerable customers.
- In the Flemish regulations, it is foreseen that the DSO takes the role of social energy provider as a last resort (if customers are dropped by commercial providers).
- DSOs install budget meters for customers who have difficulties in paying their energy bills.
- In case a customer with a budget meter still cannot pay the energy bills, the DNB works together with a local advisory commission (including the social worker responsible for debt mediation) to look for solutions adapted to the situation of the customer. Only after a negative advice of the LAC will the customer be disconnected from the grid.

### **Policy-related:**

- Following up on regional, national and international climate and energy policy; and formulation policy proposals towards policy makers.
- Putting the topic of a just energy transition at the centre of policy attention. Putting the fundamental issue of who pays (and should pay) for the energy transition at the forefront of the policy discussion.

### **Other:**

- Publication of the yearly energy poverty barometer (based on the EU SILC inquiry).
- Qualitative research (funded by the Belgian Science Policy Office) on the relationship between poverty in general and energy poverty in particular, looking at all possible dimension involved (e.g. health, housing conditions, life stories, etc.).
- The steunpunt armoedebestrijding formulates recommendations towards policy makers on how to make poverty reduction measures more effective. A.o., it publishes a two-yearly report. In 2015, the report was devoted to public services. It has a chapter on energy (which can be downloaded).

### **Links to Assist**

- ASSIST has to work closely with the existing network of energy advisors (about 250 are employed in Flanders).
- Because of the rising energy costs, there will be great interest in the ASSIST action.
- It would be interesting to explore the possibility of including EANDIS personnel in the action. They could be the ambassadors for the action in their neighbourhood.
- The HEAs should have experienced energy vulnerability themselves. This life experience gives them an important advantage when communicating with vulnerable customers: speaking from their own experience, they can address the concerns of



the vulnerable customers, and their advice is taken more seriously (if the advice comes from someone with no experience, a gap or barrier is easily created: e.g. you don't know what it means to live with a budget meter);

- Technical competences are not the most important skill that the HEAs should possess; it is more important that they have good communication skills. After all, they enter into a private home, stay there for about 1-1,5 hours, visit all rooms and therefore get an intimate insight into the living conditions of vulnerable customers who are often ashamed of these conditions. This situation requires a great deal of empathy and social skill to gain the trust of the customer.
- Make the link to the quality of living in general.
- VEA (the Flemish energy agency) is trying to set up a specific campaign w.r.t. switching the energy provider. Research by the Flemish regulator shows that there still is a significant proportion of the population that never switches to another energy provider even though this can lead to savings of more than 100 euro on a yearly basis in most cases.

### **What would you like Assist to achieve?**

- Energy audits with advice tailored to specific customer situations (instead of the more standardised reporting currently practiced).
- Visualise the energy savings (in kWh or Euro) to the households concerned so that they know and understand that they are making progress.
- Communicate in a really practical, down-to-earth way, showing step-by-step how energy can be saved.
- The ASSIST action should do an integrated audit of the living conditions of vulnerable customers. Beyond just the energy-related aspects of the dwelling, the home-energy advisors (HEAs) should check e.g. whether it would perhaps be better to move to another dwelling, and if this is the case, give advice on the possibilities (e.g. check whether the customers are perhaps eligible for a social dwelling, look for nearby opportunities, etc.).
- The HEAs should therefore work closely together with local social workers (OCMW).
- Tailoring the advice to different segments of vulnerable customers, e.g. the elderly, customers with a migration background, single-parent families, etc. All of these groups likely have different motivations, different comprehension of energy issues, different capabilities for action, etc., and this should be taken into account in the ASSIST action.
- Think carefully about your target audience. For instance, people with budget meters typically already are very aware about the possibilities for saving energy.
- Avoid overwhelming people with energy saving tips they get. Make up a summary sheet (one page max.) with the options that are best suited to their circumstances, and discuss these options in depth;

- Make sure that the energy-saving tips are relevant and manageable for the people concerned (e.g. that they have the necessary budget).
- Energy audits with intensive follow up (e.g. 4 visits instead of just 1). Address all possible problems and solutions (including a broad overview of possible financial measures). Implement multiple steps (house visits), e.g. first one to do the audit, second one to discuss possible solutions with the customer, third one to decide on what will be done + assist in the implementation of the solution (e.g. looking for a cheaper energy provider, switching contract).
- Evaluating the effectiveness of energy scans coupled with practical advice for vulnerable households. Make sure that you realise a lasting effect i.e. realise energy savings that do not require the continuous attention of the people involved (usually they have a lot of other things on their minds).
- Focus on the possibilities to save money by switching to a cheaper energy provider.
- Avoid any element of blame on the part of the victim (i.e. vulnerable customers are to blame for the problems they are experiencing in paying their energy bills, because of their energy-inefficient behaviour).
- Make the action part of a broader initiative to include vulnerable customers in the energy transition. Put in a negative way: the action should not be conceived of as a caritative action towards a specific group of poor people. This is a very stigmatising approach. It would be better to e.g. work on the level of a neighbourhood (including of course a high number of vulnerable customers), and discuss on this level how problems concerning energy use could be alleviated.
- Address the structural issues of the Flemish region (which cannot be addressed by the action) in the ASSIST policy recommendations. Create visibility at the European level.
- Promote the work of the energy cutters at the EU level.

### 6.1.3 Spain Stakeholder Surveys

#### **What are the main gaps and issues surrounding energy poverty and vulnerable citizens?**

Poor housing - the lack of thermal insulation, double glazing, etc. leads to higher energy consumption. There is thus a need for energy efficiency technologies that address both these issues in terms of retrofitting existing buildings.

Socioeconomic situation - as much as the housing situation is important, another key factor is related to the socioeconomic status of the people living inside the house. If the person living in a very inefficient house is not able to pay the required amount of money to keep the house warm, this person is considered energy poor. In fact as one of the stakeholders suggested, energy poverty is related to “the capacity of the person / family to pay the energy

bills [of the house they live in]". This lack of economic capacity to take care of the bills leads to debt which makes the socioeconomic situation of the family even worse.

Problem with the system - at this juncture, we need to point out that there are two possible ways in which stakeholders could refer to the system: (1) the local organizations that are working by identifying vulnerable people and helping them and (2) the macro-level system (energy price, politics, law...).

Taking into account the first way of understanding the system, the stakeholders argue that there is a big issue with regards to the way vulnerable people can be assessed because there is only one administration department (Local Social Services) that can give the vulnerability certificate - which is essential to avoid power cuts -and this slows down the system. This system also relies on institutions working together to tackle the problem.

When looking into the second way of understanding the system, the stakeholders point out that there is a need to develop more energy efficiency policies and the current high energy costs.

Lack of information - There is the idea that there is not enough information about energy prices. In line with this thought, there is the belief that there needs to:

- (1) spread more knowledge among citizens about what energy poverty is including the causes and impacts on health;
- (2) knowledge about bureaucracy and management (contact families...) and
- (3) consumers having knowledge about their rights.

Thus, one can argue that there are two possible ways of looking at the problem: the micro level (tackling problems from the bottom such as rehabilitation and focusing on helping the most vulnerable from the bottom-up) and the macro level (tackling the system, either politically or economically). And when doing both it is key to provide efficient and targeted information.

The stakeholders summarize the initiatives, gaps or activities that need to be addressed are:

- (1) System;
- (2) The need to develop private strategies;
- (3) Aid (financial and social);
- (4) Communication towards vulnerable consumers.

The following paragraphs explain what the stakeholders believe that needs to be addressed under these four main topics.

### **System (law)**

The Sindic de Greuges, the Catalan Ombudsman point out that there is a need to:

- (1) change the law in order to exclude from the energy bill concepts that are not specifically linked to energy consumption; and
- (2) promote the social Tariff in order to be able to help more people.

## **Private and Public company strategies**

Companies should incorporate within their plans Corporate Social Responsibility (CSR) programmes that are specially made to help vulnerable consumers. These programmes should be public and raise awareness. Social Services should know who are involved in these CSR programmes in order to coordinate with the private institutions to help those that are more in need.

In addition, there should be a clear working channel between the public and the supply companies. In that sense, it is also important to strengthen the collaboration between all the companies that work in the energy poverty field. There is a need to exchange information between private energy companies such as Gas Natural or Endesa, the big suppliers (who know about energy) and social services (who know about people).

Finally, it would be a key aspect to allow health centers to issue energy dependency certificates and work with public health institutions to take into account health issues when designing interventions to tackle energy poverty.

## **Aid (financial and social)**

Aid is mentioned in two ways; as a financial or as a social help. As a financial help it is mentioned that there is the need to provide aid to:

- (1) the refurbishment of dwellings;
- (2) reduction of energy prices; and
- (3) financial assistance providing money and subsidies to those in need to do a refurbishment in their households and that want to implement energy efficiency measures as well as implementing a self-consumption mechanism.

As for social help:

- (1) identification of organizations and channels that can complement the social services on identifying vulnerable energy consumers so social services don't collapse;
- (2) assessment of citizens by allowing them to acquire energy efficiency appliances and lighting.

## **Communication towards vulnerable consumers**

It is important to have energy advisors in order to advise people. In line with this it is also key to develop communication and education tools and mechanisms such as the ones already in place called Energetic Assessment Points (PAEs from Catalan Punts d'Assessorament Energetic) in Barcelona. There is though a need to specially focus on vulnerable consumers and work towards achieving a way to easily identify people that are energy dependent.

## **What is already being done?**

Interestingly, the topics that arose from the stakeholder answers on what is already being done, do not differ much from the things that need to be done. In that sense, while the previous question argued that there is a need for more assessment, financial aid and more

communication; the stakeholders also believe that there are key things already being developed in these areas. Nevertheless, on these questions one can notice that there are initiatives that are taking place within the field of research and investigation. As such, what they argue is that the actions that are already underway include:

#### Education, Communication and Assistance:

- Answer questions via an open telephone line about energy poverty
- Developing energy saving workshops
- Working with families to tackle short-term problems that lead to short to mid-term effects.
- Review households contracted energy power
- Help process the Social Tariff
- Assist consumers by explaining how to both contract social tariffs and minimize the contracted power capacity.
- Education about sustainable consumption
- Facilitate information about solar panel management in public housing.
- Energy Assessors
- Help consumers by looking for energy efficiency and rehabilitation public/private economic help.
- Investigation
- Conduct reports on the energy poverty situation
- Develop recommendations and suggestions
- Evaluate the impact of an interventions to tackle health issues by evaluating the effect of thermal insulation on the change of the household temperature
- Studies with neighbouring communities about alternative ways of keeping warm during winter.

#### Finance

- Direct financial assistance by Red Cross or other social organizations
- Gas Natural approved a vulnerability plan that gave 4,5 million euros to develop projects around Spain

#### **How can ASSIST align with the policies and activities of stakeholders?**

Below is a list of projects, initiatives and roles that, according to the stakeholders approached, are already in place to tackle energy poverty in Barcelona, that are in line with the ASSIST goals. The stakeholders mentioned that they could see a feasible collaboration between their organizations / projects they are developing and ASSIST. The mentioned projects are:

- Punts d'Assessorament Energètic (PAEs): Energy Assessment Points located around Barcelona where citizens can go ask questions related to energy poverty and energy efficiency. One of the main goals is to be able to detect possible vulnerable people and thus help them at home.
- Energy agents or energy advisors working at town councils that have knowledge on energy poverty.
- Project “Energia la Justa”: Learn how to read your electricity and gas bills at home.
- MésEficients cooperative. Occupability programme giving assistance to create an energy cooperative.
- Social workers with knowledge on social issues that are developing similar roles within social organizations.
- CONFAVC and Agbar developed a programme to tackle energy poverty within the neighbourhoods.
- Làbora programme: “The Labora Programme links companies to a social-responsibility programme while also arranging for various economic sectors to take part in an initiative that works to promote equal opportunities for the general public. In this sense, companies in the renewable-energy sector benefit from economic incentives and bonuses for hiring people who are registered with this programme.
- Gas Natural Foundation trains people with the same goal. It has in fact started what they call the energy school with the idea of providing educational support to social services.
- Municipal Occupability programmes. Municipalities such as Figueres or Parets del Vallès have trained a group of energy agents to give support to vulnerable families.

### **What would stakeholders like to see from ASSIST?**

From a global perspective, the stakeholders want ASSIST be able to work hand by hand with them to help them achieve their organization’s goals. As such, depending on the organization’s nature they see the ASSIST figures as (1) a more network coordinator agent or (2) a rather grassroots and hands-on fieldwork person. Therefore:

On the one hand, ASSIST energy agents could be used as network agents that could both coordinate different organizations working on the social and energy field to tackle energy poverty, and also used as regulation experts. In that sense, they would be the main point of contact when someone would have questions about regulations and how to operate.

On the other hand, it is argued that an ASSIST agent could give more specialized and targeted solutions focussed on solving energy efficiency problems within households. Within this line of thought this figure could be seen as a more fieldwork person rather than a coordinator and thus be used to “identify and quantify the vulnerability situations” (Barcelona Activa).



Interestingly, the Pompeu Fabra University (UPF) argues that ASSIST experts could actually do both things: (1) help with the living conditions of those living with Energy Poverty (assessing with energy bills, housing rehabilitation...) and (2) be a link between organizations and energy users. Taking into account the stakeholder's answers one can argue that they don't have a clear idea on what ASSIST could achieve by itself. Nevertheless, they do have a clear idea about how beneficial it would be for the organizations to count on working together with ASSIST. For instance, Gas Natural argues that "... could work in partnership with the projects that are developed by the Gas Natural Foundation". Similarly, Fundació Habitat 3 suggests that "it could be really helpful to count on this figures to help us develop our work of giving support to the people we are already helping".

While the ASSIST project is perceived as a positive initiative, there is also the concern that energy poverty is not only solved taking a bottom-up approach. In fact, there are some stakeholders that raise concerns about the risk of forgetting about the larger structural problems related to the system. This somehow reminds to the idea of "systems change not climate change" (Büllard and Müller, 2012) where it is argued that while it is important to tackle the problems from the bottom level, the key problems are in the system where they belong and thus the important thing is to change the system. As such, as it is nicely putted by the University of Pompeu Fabra (UPF, one of the stakeholders), while the ASSIST agents can help tackle the consequences; the main problem is at the macro-level (i.e. energy prices). The same is argued by the organization VINCLE who suggests that "the problem of the energy price needs to be solved from an economic and political angle". In this line of thought, the +eficients.cooperativa also argues that they give a very limited solution to the problem.

#### **6.1.4 Poland Stakeholder Surveys**

No data available

#### **6.1.5 Finland Stakeholder Surveys**

What are the main gaps and issues surrounding energy poverty and vulnerable citizens?

Concept of energy Poverty and vulnerable consumers

On approaching stakeholders it became clear that the majority have never come cross the term – energiaköyhä - (Energy Poor). Instead energy poverty is seen as part of wider poverty issue, thus the measures are not directly targeting energy poor.

##### **Housing costs**

In Finland energy costs are often seen as part of housing costs, which is partly due to the fact that a large portion of Finnish housing stock are apartment buildings heated with district heating and the cost is paid as part of the rent or remuneration charge of a condominium.

Costs in apartment buildings are allocated based on apartment size instead of actual consumption. According to the stakeholders this has both positive and negative impacts: It



gives the tenant less opportunity of decreasing their energy costs but on the other hand, all the energy improvements are done to the entire building. And as in an apartment building, heat transfers in a way that central apartments warm up regardless of their own heating and outer apartments generally need more heating, the cost allocation is seen fairer than consumption based. Also, Housing allowance, available for small income households, covers energy costs when they are part of the rent.

The stakeholders stressed that the discussion of energy costs as part of housing costs, is good in the sense that all come from the same budget of the inhabitant, and thus should be optimised in a larger entity. It was noted, that stressing the portion of people living in apartment buildings is misleading as almost half of population is living in detached houses, largely heated with electricity.

## **Government policy**

Virtually all stakeholders stressed that Finland has a quite comprehensive social security system that differs greatly from the majority of European countries, which should be considered when discussing social policy or poverty.

Politically, the direction is to look at the rising housing costs and their effect on the low-income consumers. This came up in the majority of the stakeholder interviews and is seen as the biggest issue in terms of energy poverty. In Finland, Energy policy is usually viewed as separate from social policy and thus the issue of energy poverty as a social policy issue. Concerns were also raised that as there already is a very advanced social security system, there is a risk of overlapping policies, in the case that energy policy and social policy are not kept separate.

Currently the Ministry of Employment and Economy has a working group, shaping the future of the Smart Grid and grid traffic, which in Finland constitutes more than half of the overall electricity bill. Stakeholders representing consumers are worried that the issue of who pays (and should pay) for the smart energy transition is not at the forefront of the policy discussion as the possible problems of energy poverty, existing in Finland are not acknowledged. The fear is that the poorest will be the ones who end up paying for the required investment.

## **Poverty in Finland**

All stakeholders acknowledge the existence of (relative) poverty in Finland and in that context, the possible or likely existence of energy poverty. Around 8,7% of population live under the minimum budget poverty line in 2017 and 11,7% under the relative poverty line in 2017. (Relatively poor or small income is someone making less than 60% of median income in Finland.)

Several stakeholders brought up the issue of housing costs and the fact that they are rising faster than income levels. Also, widening income level gap and the increasing relative poverty were of concern, as the index rates of basic social assistance has been frozen for the next years. There has been an ongoing discussion of housing allowance inflating

housing costs, especially in the metropolitan area. The Government is estimated to spend 1,3 billion on housing allowance in 2017. This amount has almost doubled in last ten years.

### **Housing stock**

The majority of stakeholders emphasised that due to the cold climate, the building stock in Finland is far better insulated and more energy efficient than in many other European countries. The frequency of central heating is very high. Legislation on the energy efficiency of building stock has been in place early on.

The major issues regarding housing that stakeholders raised were lack of affordable housing in and near growing urban centres, especially in the metropolitan area. Several stakeholders stressed the importance of building subsidised housing.

The biggest concerns regarding energy poverty in Finland are the homes of small income households in the rural areas, where people are migrating to cities causing house prices to drop rapidly. Several stakeholders brought up, and almost all agreed, that the people most at risk of suffering from energy poverty and health issues related to it would be these types of households, where they cannot afford the renovations/up-keep of the buildings. Building regulation at current time sets standards for future building stock to be built and is limited in regulating privately owned older building stock.

### **What are the initiatives/gaps/activities that need to be addressed?**

#### **Energy advice for vulnerable customers**

The issue that most concerned the stakeholders was actually reaching the energy poor, as no one in Finland monitors the existence of such an issue. Several stakeholders drew attention to concerns over the elderly, particularly in terms of access to technology, ability to use technology and the fact that elderly might be people particularly in need as they are generally less likely to seek assistance and benefits.

Some stakeholders also stressed, that the very poorest people in Finland are often people with multiple problems and their ability to cope with the everyday life is often low, in that regard advising them on energy behaviour might not lead to anything.

#### **Financing**

Several stakeholders drew attention to concerns that the lack of funding for energy efficiency improvements might be a bigger factor and energy advice alone, might not create the wanted results.

### **What is already being done?**

#### **Social security**

In regard to poverty reduction, Finland has a reasonably comprehensive social security system. Financial assistance is available through unemployment assistance, assistance for longer term illnesses or handicap, guaranteed pension level, housing allowance and as a last resort, basic social assistance.

The effectiveness of the social security system has always been under review and continuous improvements have and are being made. Currently the whole social system is

being restructured with Social and Health restructuring SOTE, which defines the social services provided by municipalities in a new way. Attention has been drawn to expenditure on Housing allowance, inflating housing prices and to the non-sufficiency of the level on social benefits compared to the minimum budget viewed adequate to live on.

### **Energy Advice**

The Energy authority, under the supervision of the Ministry of Employment and Economy, and through Motiva (energy agency) is responsible for advising consumers on energy efficiency issues. Their advice services are country wide, with a network of advisers. The services are targeted to consumers in general, and have two focus points: Providing advice for the consumers that are very interested in energy efficiency and renewables and on the other hand, getting general public to take interest with every day tips and changing attitudes.

The Ministry of the Environment supervises the Repair Advice Network, that advises consumers on renovations, also energy and insulation renovations. These services are country wide and targeted mostly at consumers in general. Some organisations such as the Association For The Welfare Of The Elderly, have repair advice services for special groups such as elderly and handicapped.

### **How can ASSIST align with the policies and activities of stakeholders?**

Several of the stakeholders have advice services. Some organisations are keen to collaborate using their existing network of advisers and train them better in order to support vulnerable consumers. Stakeholders also saw the need for discussion and research into the existence of energy poverty in Finland.

What would stakeholders like to see from ASSIST?

- Increase discussion on the issue
- Carry out research into the issues to see if energy poverty actually exists in Finland
- Help create definitions.
- Help make consumer issues more significant in energy policy

## **6.1.6 UK Stakeholder Surveys**

**What are the main gaps and issues surrounding energy poverty and vulnerable citizens?**

### **Government policy**

Although there has been an increased focus on implementing measures and supporting those in energy poverty, the funding and investment does not go far enough. Whilst Scotland and Wales have allocated additional funding for measures, England lags behind hence the support that can be offered to those in need is far more limited. Stakeholders referred to a lack of investment both in the past and in the present which has contributed to an ongoing issue.

However, it has been acknowledged the policy is doing its best to target the most vulnerable first and attention needs to turn to making sure vulnerable consumers are positively engaged and do not feel alienated or shamed. Stakeholders would like a wider range of measures to be available and for follow up care to be provided once measures are installed otherwise the impact is limited and consumers are less engaged or aware.

The majority of stakeholders referred directly to the quality of housing and the efficiency of the private rental sector where rent costs are high, the quality of housing can be poor and both consumers and landlords are hard to reach. New legislation requiring private landlords to improve the quality of F & G rated properties from April 2018 is encouraging but does not go far enough.

The consistency of policy and support was also an issue not only between England, Scotland, Wales and Northern Ireland but also within areas where support depends on the motivations and engagement of local authorities. Whilst some make good efforts to provide support, local funding cuts limit even the best intentioned and this has a direct effect on residents.

Stakeholders praised the increasing links between energy poverty, housing and health. This has led to greater collaboration and the incorporation of housing and energy efficiency issues into health strategy: this is more poignant in some areas than others.

### **Housing tenure and stock**

Another key issue raised by stakeholders were hard to treat properties that are off grid (no access to mains gas), solid walled and rural. These consumers are isolated and not only do they have to survive on expensive energy sources such as electricity or oil, they are often hard to communicate with, lacking IT access and good transport networks.

As mentioned, the private rental market is a primary area of concern both in urban and rural areas.

### **Energy costs**

Rising energy costs continue to be an issue, particularly when set into the wider economic context of higher living costs, high rents, the falling pound and so forth. Stakeholders stated that citizens need greater support with tariff switching to ensure they get the best deal.

It should also be noted that vulnerable consumers may also have high energy needs, for example, people with illnesses may need to use the washing machine more regularly for sheets; larger families will also need regular washing and then demands on households to have IT devices is greater, leading to greater energy consumption.

### **Energy related behaviours**

A number of stakeholders highlighted the importance of raising the awareness of, and reiterating basic energy efficiency messages. Most startlingly, one stakeholder explained that some residents do not know how their house is heated; hence a basic level of education

is still required. Many customers are entrenched in their behaviours and are reluctant to change, therefore support needs to be ongoing.

Additional issues included a lack of ability to access help and information, particularly about accessing funding. Vulnerable consumers often need support throughout the process. Tariff switching was regularly raised as an issue.

### **Wider social and political context**

The current wider financial situation for vulnerable consumers was the most prominent concern amongst stakeholders. Welfare reform, including changes to the benefit system, disability and child benefits, is a key concern at present. When this is combined with unstable employment, zero hours contracts, delayed benefit payments, a high cost of living and stagnant wages, an increasing number of people are facing hardship. Many believed that these financial issues need to be tackled in conjunction to increasing energy efficiency.

Some also raised the secondary effects of energy poverty, including rising mental health issues and a lack of school attendance: the impacts on children should not be ignored.

### **Targeting and vulnerable consumers**

Stakeholders in more strategic positions were pleased that more data seems to be available but now there should be a focus on making sure this is up-to-date and combining hard data with real-life case studies to have a wider impact on policy makers and the population. Many drew attention to concerns over the elderly, particularly in terms of access to technology, ability to use technology and isolation. However, others explained that the elderly should not be the only area of focus when families, particularly single parent families, are highly vulnerable. It was accepted that the elderly were less likely to seek support. It was noted that vulnerability needed to be made more explicit and research was underway in this area. Vulnerable consumers also need to be able to identify themselves and others that are eligible for support and that it was important to positively engage citizens.

**Please summarise below the initiatives/gaps/activities that need to be addressed.**

### **Improving retrofit and legislation**

There should be more effort to develop and enforce minimum standards. This includes raising the energy efficiency requirements of new build properties to include more renewables. The UK does have a housing crisis but the quality needs to be high.

There should be more investment in hard-to-treat properties and policies and strategies need to be longer terms and have confirmed investment to ensure that all properties can be energy efficient. This will encourage innovation and engender trust which was lost due to the failed Green Deal. There also needs to be clarity about the schemes on offer.

There are gaps in funding provision, particularly in England. More, stable, finance mechanisms e.g. Should be established such as 0% revolving funds. More work needs to be done to raise the profile of the links between housing, energy efficient and health. The multiple benefits of investing in energy efficiency need to be recognised by decision makers and the public.

## **Advice**

This should include a holistic approach to the consumer's finances. Support should be linked to income maximisation and tariff checking. Basic messages should be reinforced and hard to reach customers should be targeted. Support should be ongoing (including post installation) and account for the customers' circumstances including: social isolation, digital exclusion, and distrust. In one study in Northern Ireland, if more than one call was required, there was a 50% drop out rate. Generic information should be avoided. There should also be consistent and well-supported energy advice provision nationally rather than pockets of good practice. Advice and support is on offer but the initial engagement is needed.

## **Targeting vulnerable consumers**

Stakeholders raised concern about people falling between schemes so a holistic overview of provision should be completed and work needs to be well-targeted. Those in rural areas are a priority, particularly the elderly and isolated.

Those in private sector rental are high priority and general poverty support is also required.

## **What is already being done?**

It was encouraging to see that collaboration was the primary theme running through all stakeholder actions, whatever the background. This is either collaborative funding of projects or schemes, bi-lateral or multi-lateral referral mechanisms or collaborating on service delivery.

Many advice agencies include some element of training outside the organisation, for example, with doctors surgeries, and they all worked with a wide range of organisations. Training of volunteers was sometimes included and clear protocols (e.g. safeguarding) were followed.

Social landlords are also doing more to train tenants as energy champions and one stakeholder was involved with the EU funded TRIME project: they now have 5 paid advisors within the organisation.

Some organisations offered outreach work and home visits or/and consumer protection support. Regulation. Public bodies or energy companies often provide financial support to programmes or work closely on specific projects. Local stock modelling has been undertaken to target specific properties. Strategic organisations focus on advocacy or research. York University are currently researching policy pathways to justice in energy efficiency and also the use of social networks in energy efficiency.

## **Links with Assist**

Stakeholders who financially support Severn Wye's Warm & Well programme see how ASSIST can support the Warm & Well advice provision to target the most vulnerable consumers. It will also support the Home Energy Conservation Act reporting requirements for local authorities.

Some organisations are keen to collaborate using volunteers for a dual purpose or cross referrals in order to support vulnerable consumers. Many focused on making connections



between organisations and sharing learning to expand or replicate work elsewhere. The work also links to health priorities and targeting hard to reach vulnerable consumers or small communities that are often missed e.g. refugees.

### **What would stakeholders like Assist to achieve?**

Real engagement of local, rural, grass roots and hard to reach communities. – This came out as a high priority and the impression given was that they want a recognised face.

Increased referrals to existing advice services, particularly from private rental or hard to reach communities.

Greater understanding and awareness of residents, particularly in how funding works.

- A reduction in energy poverty.
- Evidence of impact on vulnerable people.
- More cross-referrals between organisations.
- More consistency across areas.
- A go-to local resource for sign-posting.
- Understanding of how consumers see energy poverty, as well as official definitions.
- A wider range of well-trained advisors.
- Achieving targets e.g. no of homes/people engaged.
- Engaged and active volunteers.
- Support to create harmony between contractor and client.
- Better integration of services.
- The volunteering programme can sustain beyond the project lifespan.

## **6.2 Analysis of Consumer Surveys**

The aim of the consumer questionnaire is to provide information about the perception, needs and expectations of vulnerable consumers in relation to energy efficiency. This will help ASSIST partners to gain a comprehensive understanding of:

1. The housing stock and background of vulnerable consumers across partner countries
2. The perceptions of vulnerable consumers about energy efficiency
3. The challenges faced by vulnerable consumers
4. Current actions taken by vulnerable consumers
5. Potential activities for the Home Energy Advisors

The questionnaire data will be collated across all partners and will provide a comprehensive overview of the situation for consumers. This information will be used to inform Home Energy



Advisor activity and to support discussions and dissemination with policymakers and stakeholders.

## 6.2.1 Italy Consumer Surveys

### 1. Partner details

Partner name:	<b>Acquirente Unico</b>
Name of region/country:	<b>Italy</b>
Key contact regarding consumer surveys:	<b>Emiliano Battazzi</b>
Email of key contact:	<a href="mailto:Emiliano.battazzi@acquirenteunico.it">Emiliano.battazzi@acquirenteunico.it</a>

### 2. Data collection

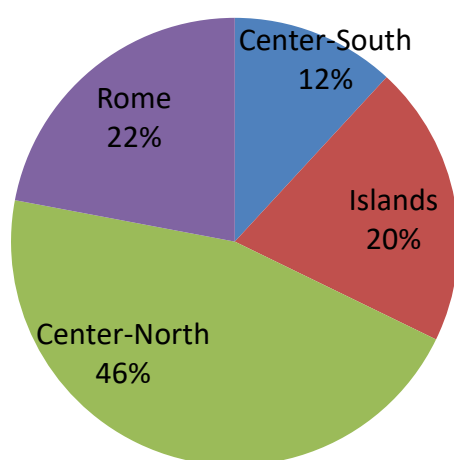
Number of questionnaire disseminated	<b>132</b>
Number of questionnaires completed	<b>132</b>
Date of data count	<b>24 January 2018</b>
<b>Methodology:</b> Questionnaires have been spread out to consumers through different channels: online, both via partners and stakeholders websites; by means of Consumers Association's help desks.	
<b>Challenges:</b> Several issues arose during questionnaire dissemination and data collection. A lot of potentially interested stakeholders didn't want to provide the questionnaire to the consumers, thus reducing the impact of the survey. Mostly, charities and social stakeholders found irrelevant or time-wasting to disseminate such a questionnaire to their usual target.  Due to the difficulties in collecting data within the project timeframe, Italian partners have decided to keep the survey open and to keep disseminating it through all possible channels (also taking advantage of the activities to be implemented within the future work packages of the project).	

### 3. What type of area do your consumers live in?

**Key differences in the areas where consumers live (Q.17). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Consumers responding to our survey live mostly in the cities of Rome and Milan, because of the partners we engaged in disseminating - mostly based in those cities. Anyway, there's an interesting significance of answers from the island (Sardinia and Sicily) from vulnerable consumers (20%): indeed, according to Italian academic studies, living in the islands is one of the biggest driver of energy poverty.

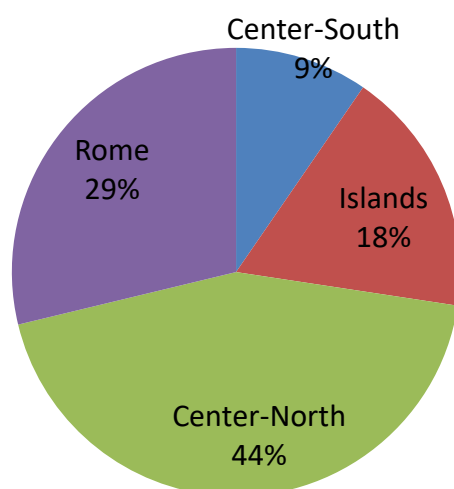
### Where do vulnerable consumers live?



Answers from the southern regions are definitely lower than expected, but it can be mostly accounted on the lower number of dissemination channels and the bigger social stigma attached to declaring himself vulnerable (12%).

Last but not least, there's a relevant amount of answers from the Northern regions, almost equal in declaring themselves vulnerable (46%) or not (44%). Other than proximity and easiness of access for our channels, that could also originate from a reduction of comfort during winter (trade-off between heating and other services).

## Where do other consumers live?

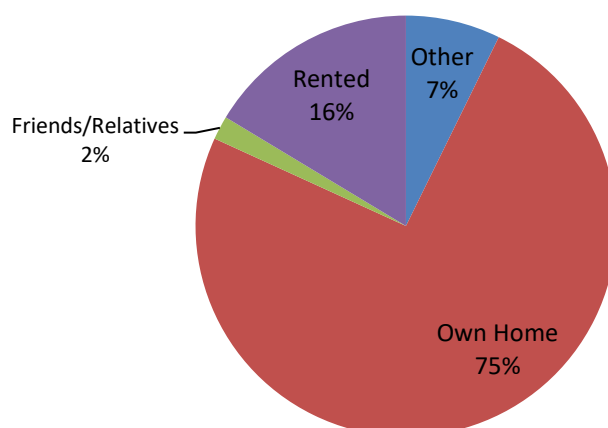


### 4. Tenure, Property type and renovation?

**Key differences in the tenure, type of properties and work carried out to improve the property (Q.18 – Q.21). Add comments to explain patterns and how they link to the project and/or method of data collection.**

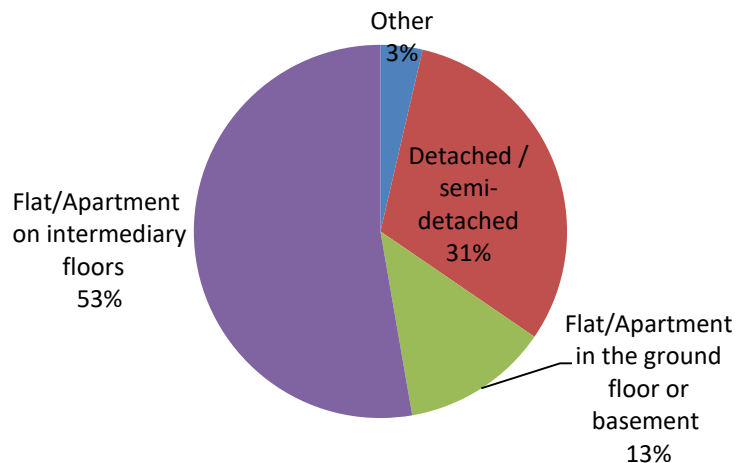
Most of our vulnerable consumers are homeowners: even though it could be counterintuitive, because renting a house can also be a driver of vulnerability, it is actually not surprising in Italy, where 80% of people own the house they live in. The percentage of vulnerable respondents homeowner (75%) is thus slight inferior to the national one.

## Where do vulnerable consumers live?



With regard to the type of housing, most of vulnerables are living in Flat/Apartment on intermediary floors (53%), as for the other group. There is a huge difference in consumers living in detached/semi-detached house: in the vulnerable group it's 31%, while in the other group is roughly 9%.

### How is your home?



The majority of homes in Italy, 64%, were built before the first law on efficiency and insulation of 1976: thus our sample is quite correspondent to this percentage, for both vulnerable (69%) and the other group (80%).

Almost half of houses has been refurnished, even if for vulnerable consumers the percentage is slightly lower (45%) than for the other group (52%).

## 5. Behaviour Change?

**Key differences in behaviour change to reduce energy consumption (Q.26). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Behaviours for energy saving are quite widespread among all consumers of the questionnaire, even if areas of improvement can be identified:

- Roughly 62% of both groups switch off the heater in the rooms where they are not present;
- Almost the same percentage of both groups reduce the temperature in the living / dining room or bedrooms (64,4% for vulnerables, 63% for others)
- Vulnerables are just a bit more careful in reducing the temperature in the home if, for some days, there is nobody staying there (78% vs 74%); but they are less eager in reducing the use of air conditioning (57,6% vs 60%)
- Both groups could be more careful in reducing the use of dishwasher (59%) and in completely switch off (61% vs 66%) tv, computer, audio system, when

not used (instead of putting them in stand-by mode), but they are strongly involved in switching off the lights when they are not needed (88%).

## 6. Financial Support?

**Key differences in how many consumers have received financial support in order to pay their energy costs over the past 12 months (Q.29 & Q.30). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Our survey confirms the evidence that financial support is not common between Italian consumers: only 1,7% of our vulnerables could enjoy the energy bonus. According to the answers, it is mostly because of too tight income thresholds (55%), but also for lack of knowledge of the bonus (18,6%). According to the Italian Energy Authority, only 30% of consumers fitting the requirements obtain the energy bonus.

## 7. Interest in energy advice?

**Key differences in whether energy advice would be appreciated by the consumer (Q.31). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Vulnerable consumers are slight more interested in professional advice (90% vs 82%), for the majority in order to reduce the cost of energy bills (59,3%), an issue much more relevant for vulnerable group (14% higher than other consumers). At the same time, they don't seem to care about increasing the level of health (15%) and comfort within home (16%), thus confirming somehow that they can trade-off energy consumption for more available income.

However, the idea of reducing the energy consumption without reducing the level of comfort is still intriguing for vulnerables (37,3%), also when compared with optimising the energy consumption without the need for complicated and sophisticated technologies (23,7%).

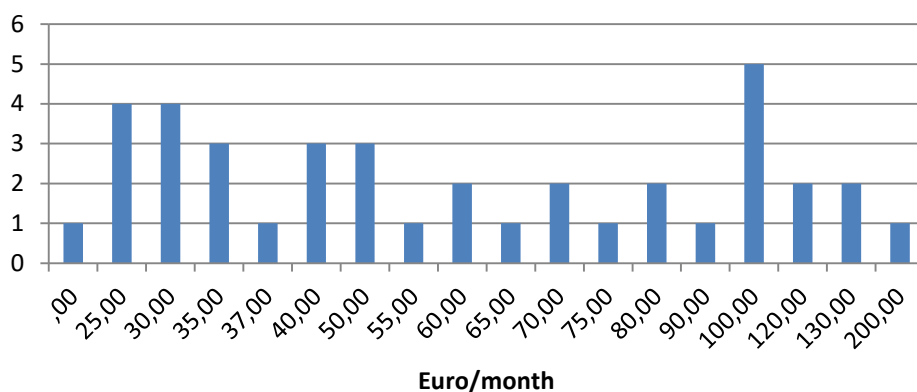
## 8. Housing summary

**Key differences in energy consumption (Q.33). Add comments to explain patterns and how they link to the project and/or method of data collection.**

It's interesting to notice that in the vulnerable group, the average monthly expenditure for electricity is above 50 euros for the majority (51,3%). For the other group, instead, a strong majority pay 50€ or less (61,7%). Even if quite surprising, this could also open opportunities for energy saving: vulnerables are paying too much, and there's plenty of space for reducing their bills through efficient behaviour and accessing the

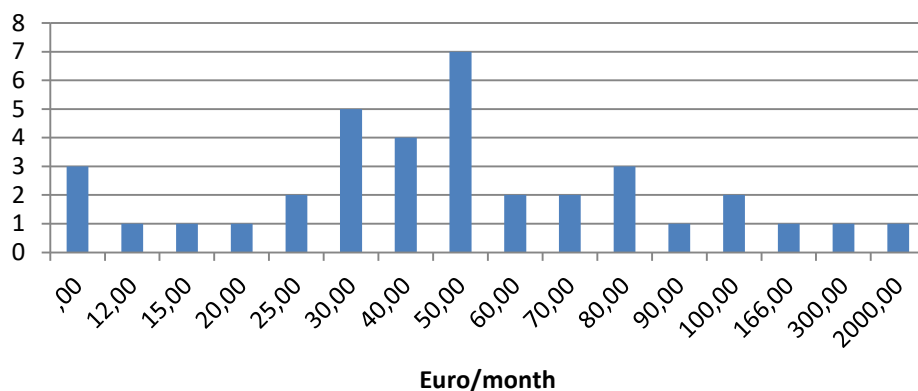
bonus. The average yearly expenditure seems to strengthen this data (55% are paying more 750€).

### Average monthly electricity expenditure for vulnerables



For natural gas, the survey provides quite a different picture: expenditures look similar between the 2 groups (with 65% vs 63% paying below 50€), thus showing to carefully manage their own gas consumption. This could also be a result of a traditional education for the consumption of natural gas for heating and cooking in Italy, and also a result of the mandatory usage of thermostatic radiator valves, which are easy to use.

### Average monthly gas expenditure for vulnerables



## 9. Additional comments and observations unique to each country

Some of the answers are not completely reliable: for instance, monthly and yearly expenditures don't correspond properly.

## 6.2.2 Belgium Consumer Surveys

The vulnerable consumers for the Belgian case turned out to be 132 out of 140 participants, even if not all older than 65 persons were automatically assumed to be vulnerable. This has to do with the selection of the questionnaire, which targeted vulnerable consumers specifically. More specifically:

- 105 of the respondents were not working
- 18 indicated not having enough money for basic needs, 54 only for basic needs,
- 98 of the respondents received some kind of social funds
- 37 had cold related health issues

### 1. Partner details

Partner name:	<b>VITO</b>
Name of region/country:	<b>Belgium – Flanders</b>
Key contact regarding consumer surveys:	<b>Pieter Vingerhoets</b>
Email of key contact:	<a href="mailto:Pieter.vingerhoets@vito.be">Pieter.vingerhoets@vito.be</a>

### 2. Data collection

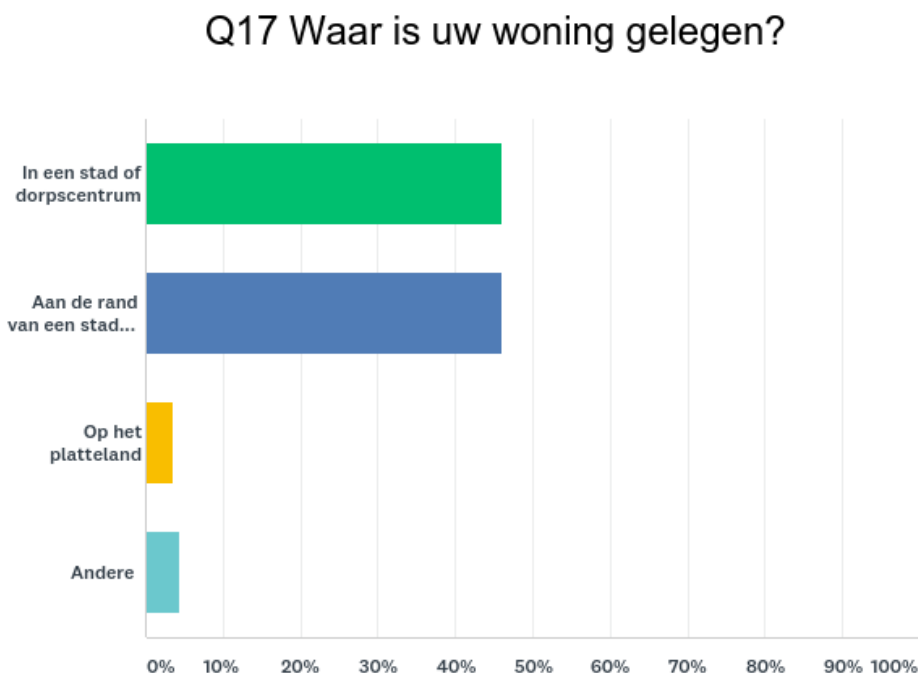
Number of questionnaire disseminated	<b>140</b>
Number of questionnaires completed	<b>140</b>
Date of data count	<b>31-01-2018</b>
<b>Methodology:</b> The questionnaires were disseminated under guidance of the 'Energiesnoeiers'. This is an initiative where persons or families in Flanders can invite an energy expert, who gives advice on possible energy reductions in the household. The expert filled in the questionnaires together with the families and the paper versions were scanned and processed by VITO. Around 40 responses were also retrieved online.	
<b>Challenges:</b>	



Energy-poor or vulnerable customers often don't have access to internet or do not have the time to respond to an online questionnaire, therefore the responses were retrieved under guidance. The fact that an energy expert was accepted to retrieve the questionnaire with the households means that the population regarding the question 'would you be interested in inviting an energy expert' (yes/no) is not independent.

### 3. What type of area do your consumers live in?

**Key differences in the areas where consumers live (Q.17). Add comments to explain patterns and how they link to the project and/or method of data collection.**



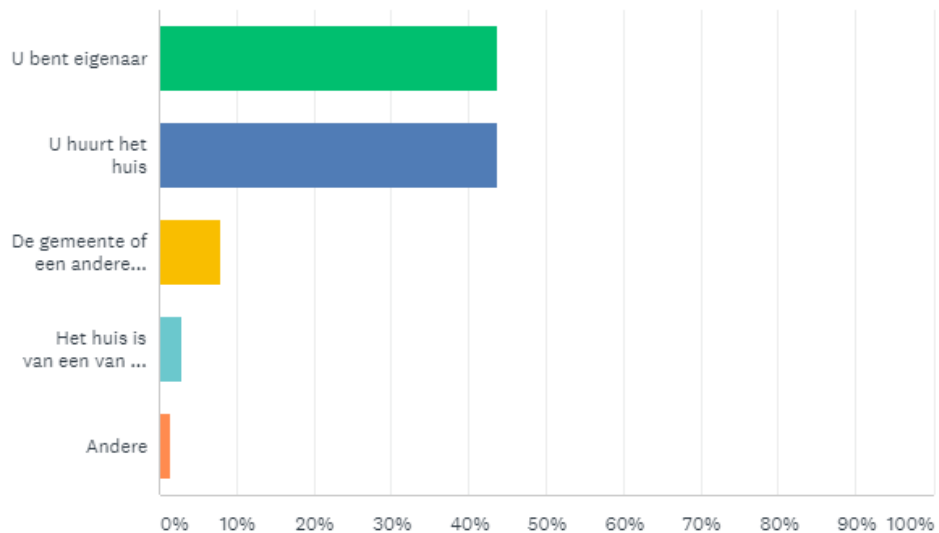
The questionnaires were collected around four different regions: Sint-Niklaas, Eeklo, Ghent and Roeselare. Most respondents were living in the city or village center (top, green) or at the edge of a city/village (blue). The few amount of rural respondents has to do with the heavily urbanized character of Flanders. Despite the heavily urbanized character 44 of 137 houses is open (no neighboring buildings).

### 4. Tenure, Property type and renovation?

**Key differences in the tenure, type of properties and work carried out to improve the property (Q.18 – Q.21). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Wie is eigenaar van de woning?

Answered: 137 Skipped: 3

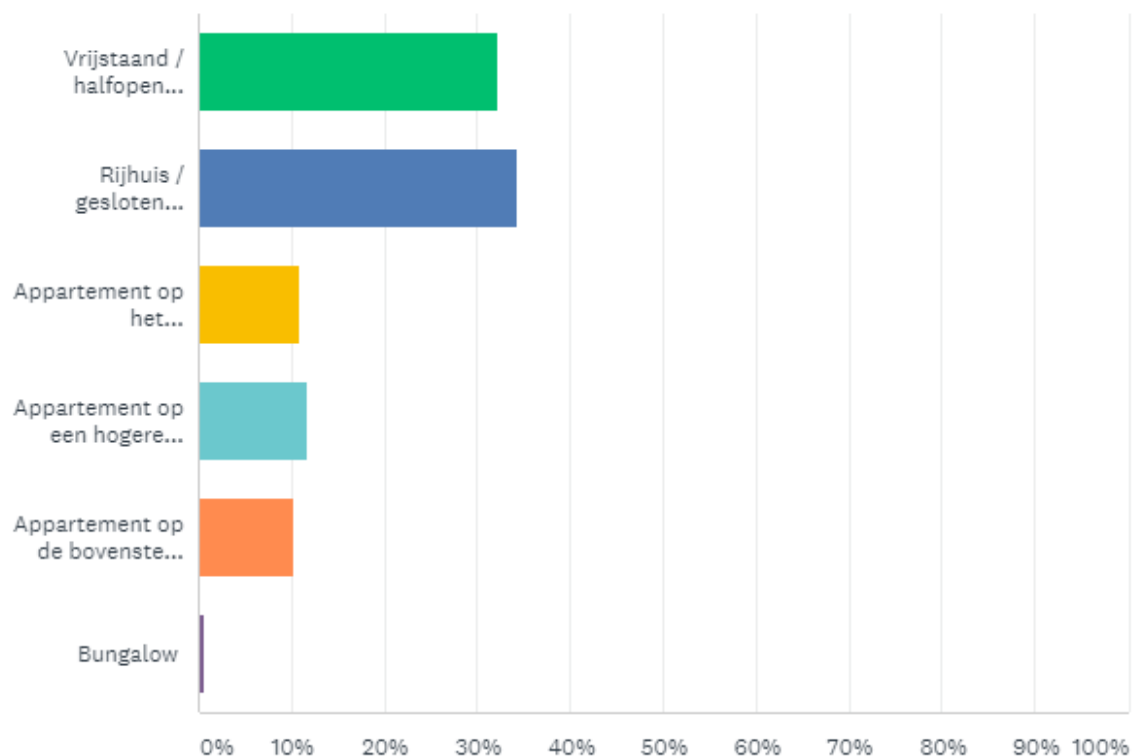


60(43,80% of the respondents owned the house, 60 were renting, 11 were living in a house owned by the city and 4 were living in the house of friends/relatives.

**Is your home (choose one)...? (detached house / apartment / bungalow etc...)**

## Uw woning is

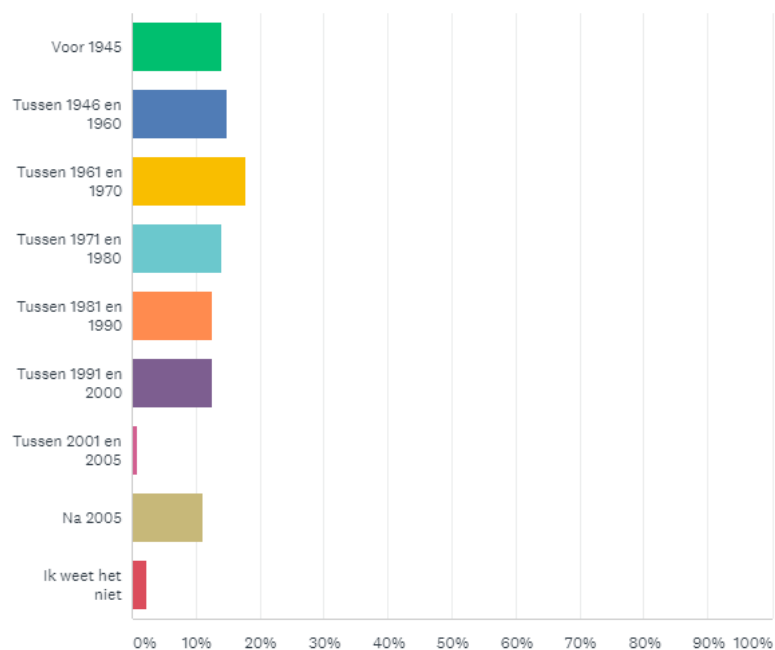
Answered: 137 Skipped: 3



44 were living in an open building, 47 in an enclosed home, 15 in an apartment on the ground floor or lower, 16 in apartment in between and 14 in an apartment on the top floor. 1 bungalow.

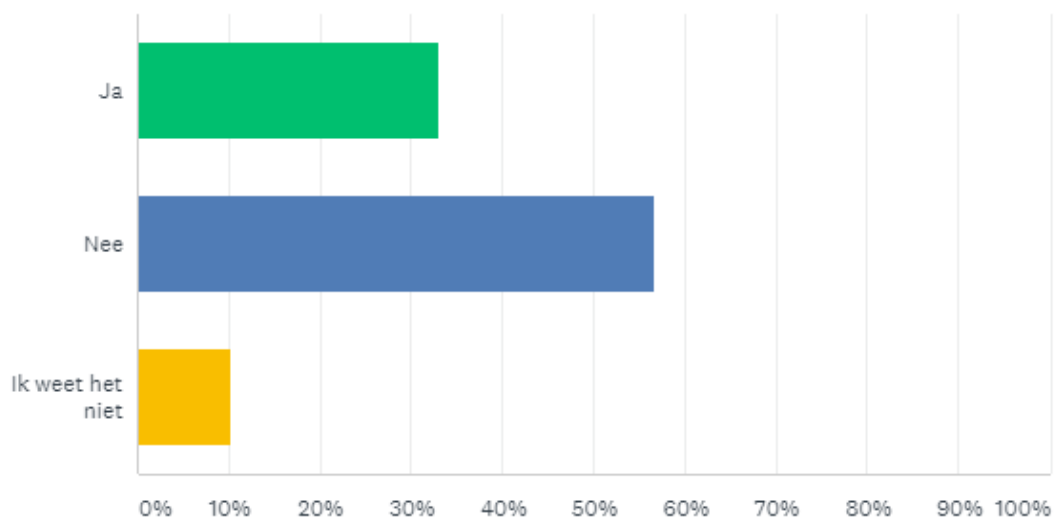
## Roughly, when was your home built?

Answered: 135 Skipped: 5



## Has your home been renovated?

Answered: 136 Skipped: 4



33% yes, 57% no, 10% did not know.

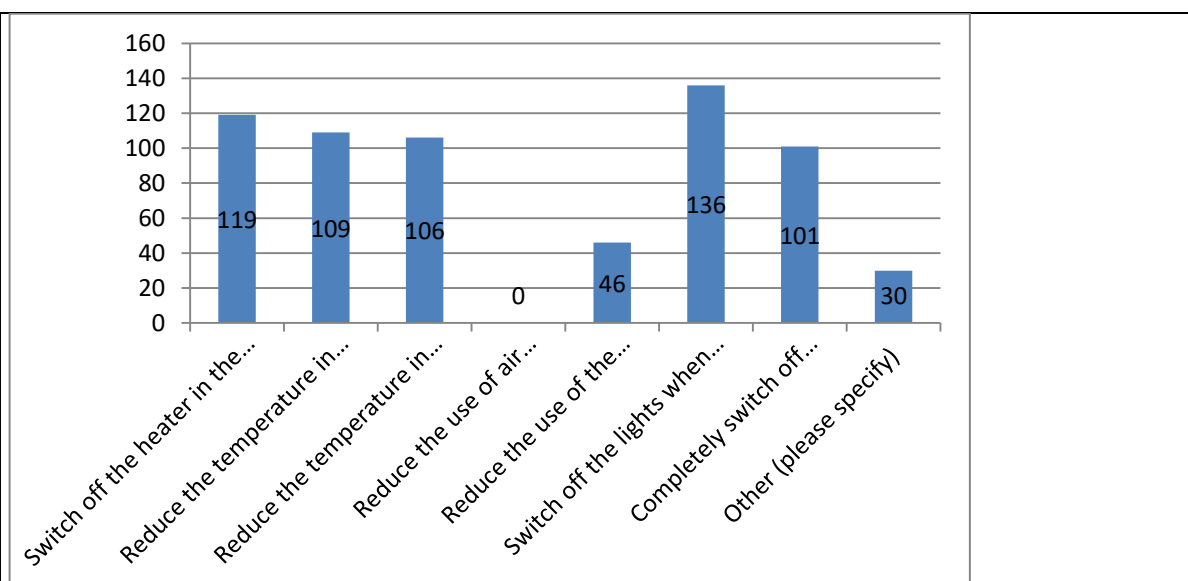
In general, the Belgian building stock is very diverse. Renovations of older houses are quite common.

## 5. Behaviour Change?

**Key differences in behaviour change to reduce energy consumption (Q.26). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Only 2 of 127 answered no, the other 125 answered yes

The measures were the following:



Except for airconditioning, which is quite uncommon due to climate reasons, and dishwashers which are not always present, most of the typical behavioural exercises are followed by the respondents. Note that through the selection process, these numbers might present an overestimation in comparison with the total population.

## 6. Financial Support?

**Key differences in how many consumers have received financial support in order to pay their energy costs over the past 12 months (Q.29 & Q.30). Add comments to explain patterns and how they link to the project and/or method of data collection.**

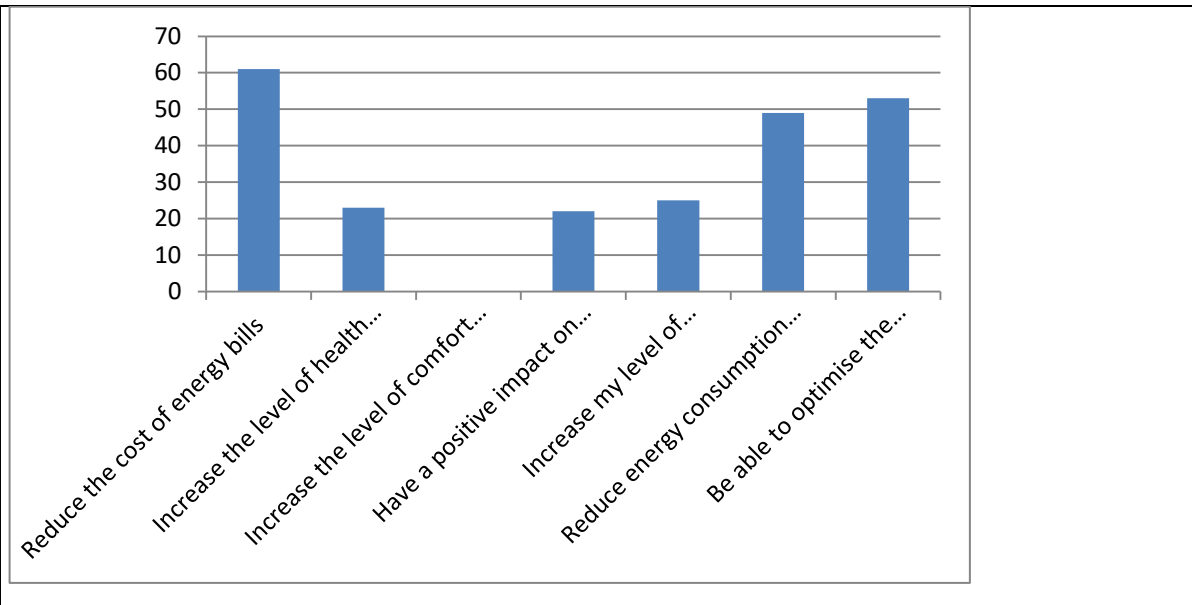
75 are receiving a social tariff for vulnerable consumers, 6 received a minimum delivery of electricity, gas or oil. 17 received financial support of the municipality, 50 did not receive financial support.

31 of the respondents did not satisfy the criteria for financial support, 8 did not know, 2 were choosing not to request support, 1 was not interested.

## 7. Interest in energy advice?

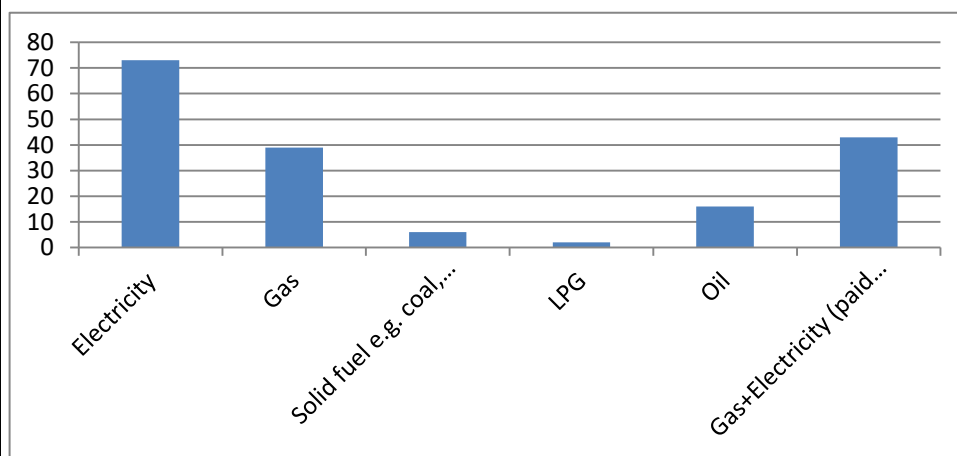
**Key differences in whether energy advice would be appreciated by the consumer (Q.31). Add comments to explain patterns and how they link to the project and/or method of data collection.**

70 answered yes, 63 no, however this question needs to be deleted for the Belgian case, as participants were selected in the context of an 'energy scan'. Most of the respondents care about the energy bill and comfort rather than health issues, environment or knowledge.



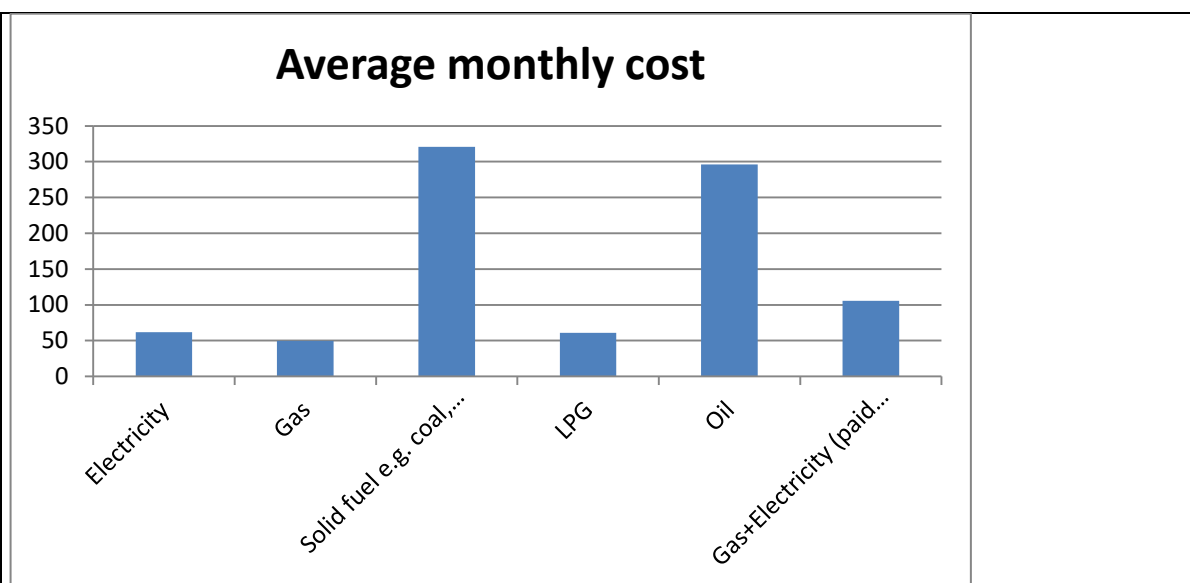
## 8. Housing summary

**Key differences in energy consumption (Q.33). Add comments to explain patterns and how they link to the project and/or method of data collection.**



Most people in Belgium use gas for heating, followed by oil and biomass. Only very few people have a heat pump (certainly not the vulnerable customers) due to the high taxes on electricity in comparison with gas.

The price people pay is not always proportional to the consumption, as it depends on the social tariff (98 respondents are having a social tariff). Remarkable is that a lot of people added a biomass heating to save on the energy bill, ignoring possible health issues.



The average monthly cost indicates that biomass and solid fuel are more expensive. Indeed, pellets are expensive but we do not know exactly which type of solid biomass is burned. In addition, the low amount of respondents that heat with oil, LPG or biomass makes it not statistically relevant to draw conclusions. Special comment for Belgium is that a lot of people pay gas and electricity simultaneously so they only have a common indicator.

## 9. Additional comments and observations unique to each country

In Belgium, a significant amount of people are getting financial support or social tariffs and only very few of them report not being able to maintain a healthy temperature in the house. In addition with the temperate climate, vulnerable consumers will not always experience energy poverty related health issues.

## 6.2.3 Spain Consumer Surveys

### 1. Partner details

Partner name:	ADE (Alginet Distribución Energía Eléctrica)
---------------	--



Name of region/country:	<b>Alginet, Valencia (Spain)</b>
Key contact regarding consumer surveys:	<b>Alma Solar</b>
Email of key contact:	<a href="mailto:alma@electricadealginet.com">alma@electricadealginet.com</a>

## 2. Data collection

Number of questionnaire disseminated	<b>168</b>
Number of questionnaires completed	<b>155</b>
Date of data count	<b>28.12.2017</b>
<p><b>Methodology:</b></p> <p>ADE is part of the CEA group (the Electric Cooperative of Alginet), and therefore has direct contact with the end energy consumers, through the retailer of the CEA group – Suministros especiales alginetenses -. The main purpose of the electric cooperative is to commercialize energy to its associates, but being a cooperative the group has always had a special sensitivity with the end users, especially with vulnerable families and end users in risk of vulnerability. In this line, the companies of the group have several aid programmes in place since 2008, i.e. and elderly aid programme (with direct discounts in the energy bills for people over 65), the food voucher programme (monthly food vouchers for vulnerable families) or the disconnection protection and bill financial negotiation. Thanks to these programmes, the CEA group has already identified a list of vulnerable users and users at risk of vulnerability.</p> <p>ADE has taken advantage of this direct link with the end users and has disseminated and collected the questionnaires directly to the group of vulnerable consumers already identified by the CEA Group.</p> <p>ADE has disseminated the questionnaires to the end users attending the different aid programmes in place, by handling them directly to the people in place and providing assistance in when any doubts about the questions arose. Therefore, we can assume that all the responses gathered in Alginet account from vulnerable consumers or consumers at risk of vulnerability.</p>	
<p><b>Challenges:</b></p> <p>The personnel working at CEA front office where the ones handling the questionnaire directly to the respondents and the questionnaires were filled in place.</p>	

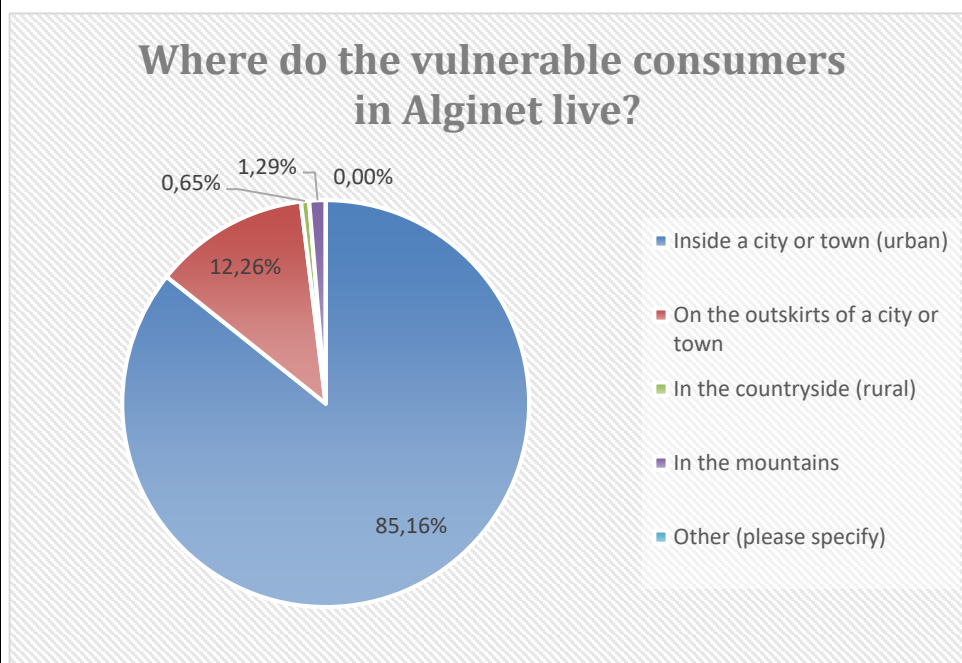
The CEA personnel was instructed to answer and solve any issues that then end users might have about the questions and the purpose of the questionnaire, Therefore, no major issues where faced during the data collecting process.

### 3. What type of area do your consumers live in?

**Key differences in the areas where consumers live (Q.17). Add comments to explain patterns and how they link to the project and/or method of data collection.**

As mentioned before, in Spain all the questionnaires were conducted in the area of Alginet (a 13.500 inhabitants' village located 25 km from Valencia). Therefore, all the respondents come from the same area.

Being a medium size village, most of the respondents live inside the city (specified in the questionnaire as city centre), although it is important to mention that a significant number of respondents (12.26%) live in the outskirts of the city, while only 1.94% live in the countryside or in the mountains.

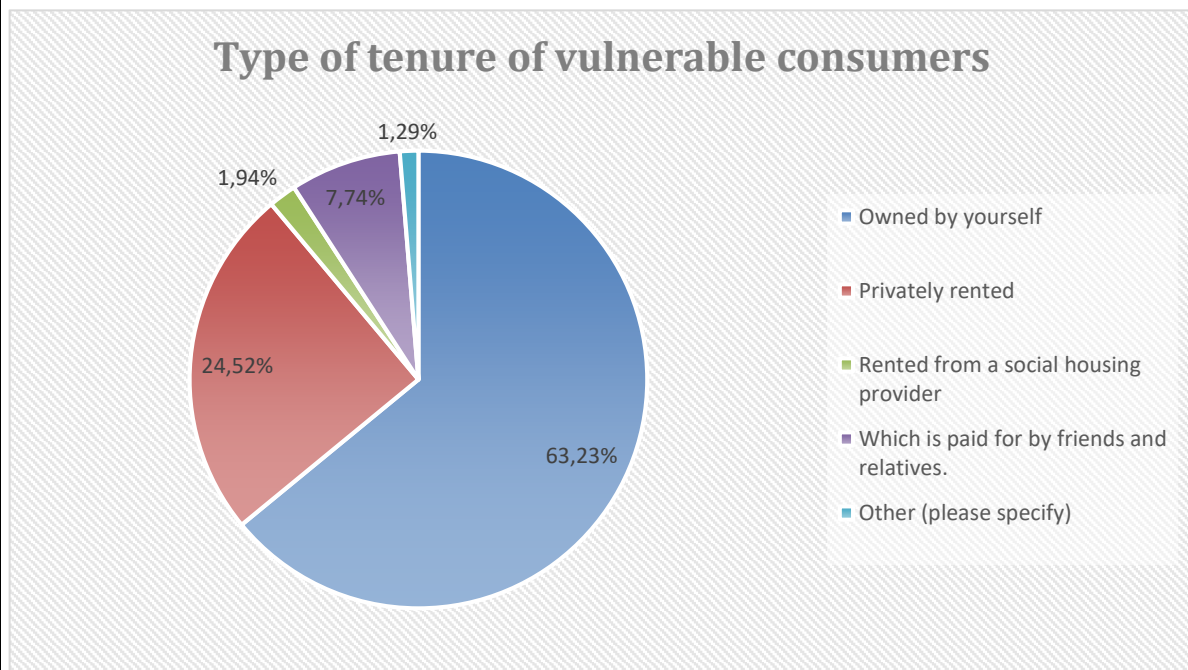


### 4. Tenure, Property type and renovation?

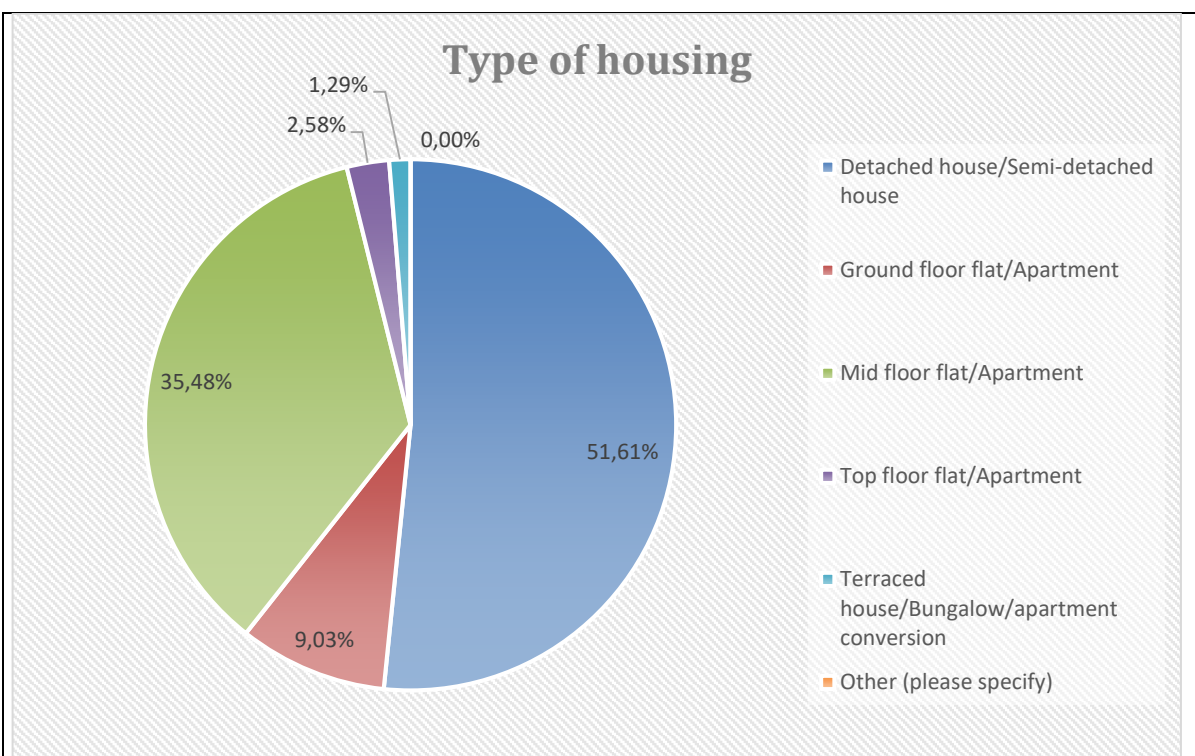
**Key differences in the tenure, type of properties and work carried out to improve the property (Q.18 – Q.21). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Most of the vulnerable consumers surveyed live in their own home (63.23%) or in a rented house (24.52%). These data differ from the average for the Valencian Community where, according to the INE (National Statistical Institute), 79.9% of families lived in a house of their own property during 2016 (latest data available), while 15.9% of people lived in a rented house during the same period. These differences can be founded on the fact that the questionnaires were targeting vulnerable users only, a group with more difficulties to access a house in property.

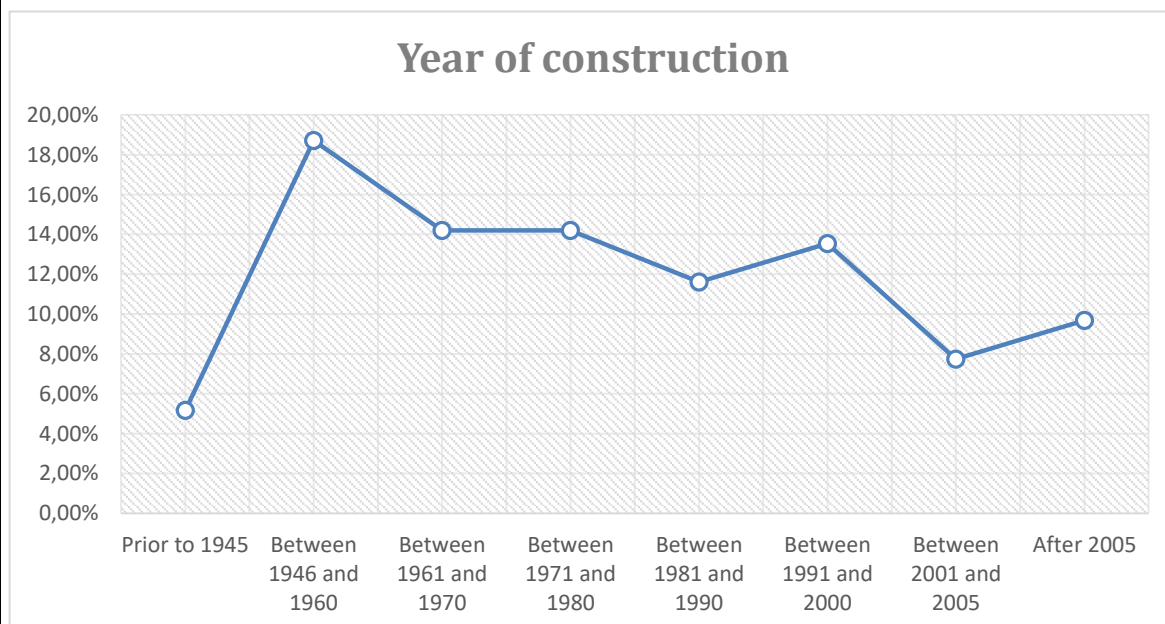
It's also noticeable the fact that nearly 8% of the surveyed people live in houses payed by friends or relatives and that nearly 2% of the respondents live in houses rented or lent by social housing providers or public administrations such as the city council.



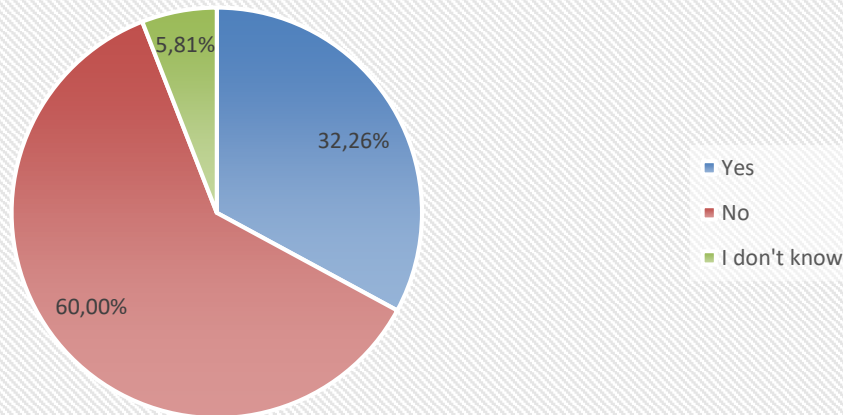
With regards to the type of housing, most of vulnerable consumers (51.61%) live in a detached or semi-detached house, while 35.48% of the people surveyed live in flats or apartments on intermediary floors. This is typical in a village like Alginet, where half of the housing are detached or semi-detached buildings and approximately a third of the housing are apartment blocks.



The first Regulation of thermal installations in buildings was published in Spain in 1998. Most of the buildings are thus constructed before this regulation was in place (around 75% of the buildings for the surveyed end users). Despite of that, only 32.26% of the respondents have refurnished the houses.



### Has your home been refurnished?



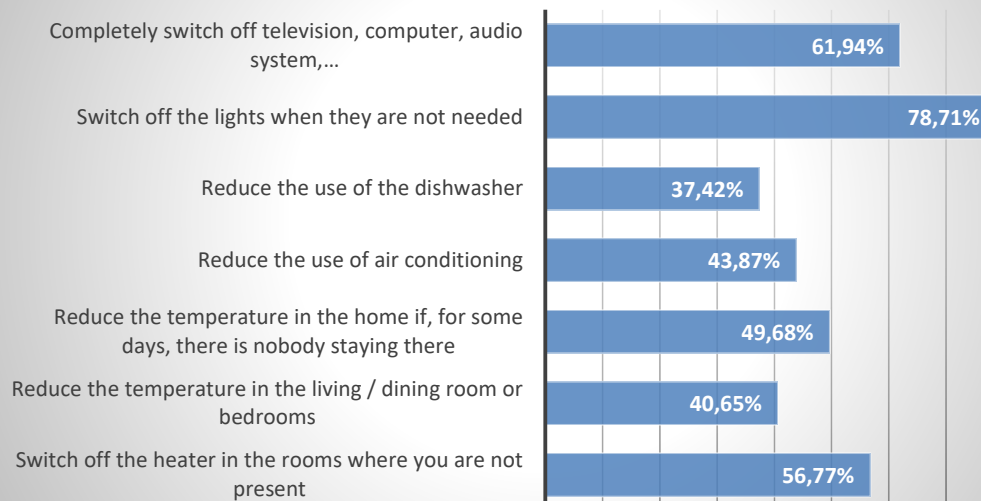
## 5. Behaviour Change?

**Key differences in behaviour change to reduce energy consumption (Q.26). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Energy efficiency measures are quite widespread among the questionnaire respondents and most of them (92.9%) claim to have implemented one or more changes in their behaviour in order to reduce their energy bill.

- Switching off the lights when they are not needed, and completely switching off the electrical devices instead of putting them in stand-by mode, are the most popular behavioural changes implemented among the surveyed people, with a 78.71% and a 61.94% of positive answers respectively;
- Switching off the heater in the rooms where there is no presence and reducing the temperature at home when there is nobody in, are also behavioural changes implemented by half of the respondents, 56.77% and 49.68% respectively;
- Reducing the use of air conditioning or the dishwasher are the least popular among the respondents with a 43.87% and 37.42% respectively.

## Behavioural measures applied



## 6. Financial Support?

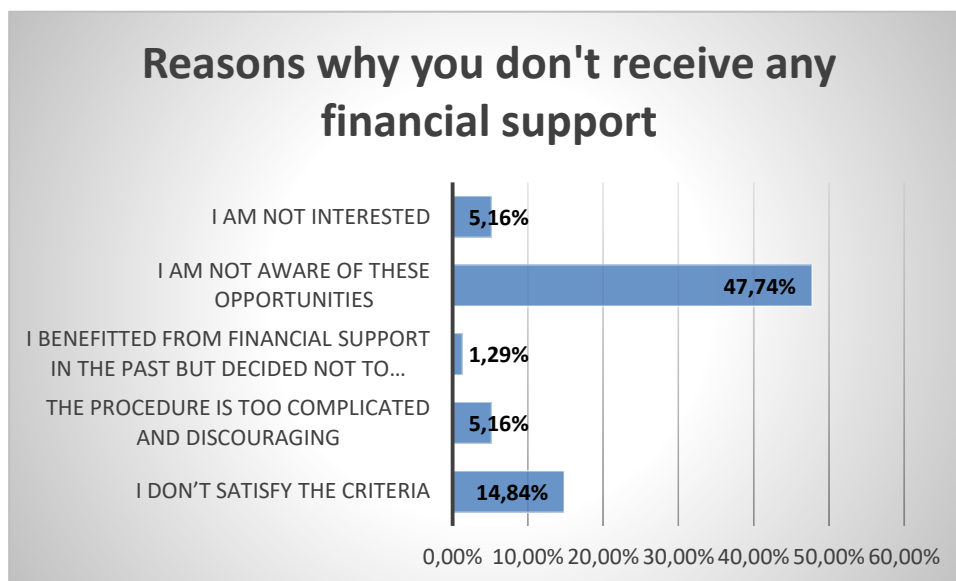
**Key differences in how many consumers have received financial support in order to pay their energy costs over the past 12 months (Q.29 & Q.30). Add comments to explain patterns and how they link to the project and/or method of data collection.**

The responses received about financial support show that only a small percentage of the end users, even if they are in situation of penitential vulnerability, are receiving financial support in order to pay their energy bills.

The first thing that surprised us was that only 29% of the surveyed people answered to question 29 (we can assume that this is due to the lack of knowledge about these type of opportunities, see comment about question 30). Among the people who did respond to the question, 26.67% were receiving financial support to pay their energy bills. On the other hand, 73.33% answered that they are receiving other type of support, this is reasonable if we take into account that the main target groups for the survey were end users identified by the CEA group as vulnerable end users or users at risk of vulnerability, participating in the aid programmes of the electric cooperative. Therefore, most of them are receiving some kind of support from the CEA.

The responses to question 30 show that nearly half of the people surveyed (47.74%) are not aware of these type of support they can claim. Only 14.84% of the respondents claim not to fulfil the criteria to access the financial support, while

around 10 % of them are not interested in this type of support or think the procedure is too complicated. The exact figures can be checked within the following figure.



## 7. Interest in energy advice?

**Key differences in whether energy advice would be appreciated by the consumer (Q.31). Add comments to explain patterns and how they link to the project and/or method of data collection.**

62.58% of the surveyed people think it would be beneficial for them to have support from the HEAs, 29.03% of the respondents are not interested.

The respondents' main interest in the HEAs advice is to reduce the cost of energy bills (56.13%). Reducing the energy consumption without reducing the level of comfort (20.65%) and increasing the level of health in the home (20.65%) are also interesting issues for the surveyed people.

## 8. Housing summary

**Key differences in energy consumption (Q.33). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Only 65.16% of people provided information about their average electricity expenditures which, from the data provided by the responses, is 60.70€/month.



For the other sources of energy, the answerers are even lower: 25.16% of people provided information about their average gas expenditures (33.87€/month); 2.58% of people provided information about their average oil expenditures (77.5€/month) and no answer was received about solid fuel or LPG. This is due to the fact that in Valencian Community most of the home energy consumption is in the form of electricity.

## 9. Additional comments and observations unique to each country

Due to the specialities of the target group surveyed in Spain, we can't compare results among vulnerable and non vulnerable respondents through this questionnaire. Nevertheless, the data collected in Spain is quite valuable in the sense that all the responses gathered are coming from vulnerable end users or users at risk of vulnerability, located in the same area (with equal conditions of temperature, environment, living conditions, etc.) which can provide a detailed view of the specific conditions of this group, already pre-segmented.

## 6.2.4 Poland Consumer Surveys

### 1. Partner details

Partner name:	<b>Federacja Konsumentów</b>
Name of region/country:	<b>Poland</b>
Key contact regarding consumer surveys:	<b>Longina Lewandowska-Borówka</b>
Email of key contact:	<b>rzecznik@federacja-konsumentow.org.pl</b>

### 2. Data collection

Number of questionnaire disseminated	<b>300</b>
Number of questionnaires completed	<b>215</b>
Date of data count	<b>November 2017</b>
<b>Methodology:</b>	

We have used the PAPI research technology - Personal Assisted Paper Interviewing – we have carried out interview using a traditional method - a paper survey, conducted by an interviewer. Thanks to the direct contact of the interviewer with the respondent, we were able to receive full and more comprehensive answers to the questions posed. The interviewer had the opportunity to deepen the respondent's answer by asking additional questions. In selected issues, this technique also allowed for spontaneous responses. PAPI interviews were carried out by social workers from Warsaw social assistance centers working with people who require systemic financial support.

### **Challenges:**

Conducting surveys required intensive, active support from the interviewer side. Thanks to the involvement of the Office of Assistance and Social Projects, the Department of Social Assistance of the Warsaw Municipal Office, we could conduct surveys directly among people at risk of energy poverty, moreover the interviewers were qualified social workers.

### **3. What type of area do your consumers live in?**

**Key differences in the areas where consumers live (Q.17). Add comments to explain patterns and how they link to the project and/or method of data collection.**

We conducted the study in social assistance centers in Warsaw, so all our respondents live in the city and in the suburbs (2.8%).

### **4. Tenure, Property type and renovation?**

**Key differences in the tenure, type of properties and work carried out to improve the property (Q.18 – Q.21). Add comments to explain patterns and how they link to the project and/or method of data collection.**

The flat / property is owned – this answer concerns 38.6% of respondents. This is a very low indicator for Poland, statistics show that as much as 83.5% Poles have own flats or houses (Eurostat data). If the data obtained from this question are combined with data on the monthly income of the households, it is not surprising that the next group of respondents are residents of social premises (27%). 10.2% of the surveyed rent a flat and almost equal in size (9.8%) is the group of residents of commune properties. 36.8% of respondents live in the social housing. The conditions related to the occupation of this type of flats are specific. The residents have to meet different criteria - they are available for people in a difficult financial or life situation.

15.3% of respondents live in the flats on the ground floor, 51,6 % on the 1th and 9.3% on the top floor. A large percentage of respondents (20%) live in a house or semi-detached house.

Moreover respondents live in old or rather old properties. As many as 19.5% of respondents live in houses, which was built before 1945. It should be emphasized that 28.4% of respondents live in post-war construction (built between 1946 and 1960).

Houses built from the late 1950s to the nineties were constructed from a prefabricated large slab, characterized by low thermal insulation. 62.4% of respondents answered that the real estate they live in was created between 1946 and 1980, when other construction norms were apply, for example several times lower thermal requirements.

## 5. Behaviour Change?

**Key differences in behaviour change to reduce energy consumption (Q.26). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Almost two thirds of respondents try to use electricity and heating in the economical way (64.7%), however relatively large percentage of respondents (35.3%) don't try to save energy.

139 out of 215 respondents declare economical behavior and 178 declare that they turn off lighting in rooms in which no one is staying. This is the most popular and intuitive behavior aimed at saving energy.

## 6. Financial Support?

**Key differences in how many consumers have received financial support in order to pay their energy costs over the past 12 months (Q.29 & Q.30). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Out of 215 respondents, 84 (39.1%) declare that they had not received any financial support related to the usage of electricity and gas.

The remaining 131 persons (60.9%) receive a social security, in the form of so-called energy security, which aims to compensate electricity expenses. 121 people received support from local self-government units - social assistance centers. The remaining 10 persons received assistance from various sources: an energy or gas supplier, non-governmental organizations, family.

## 7. Interest in energy advice?

**Key differences in whether energy advice would be appreciated by the consumer (Q.31). Add comments to explain patterns and how they link to the project and/or method of data collection.**

121 respondents do not see the need to receive support from a professional Home Energy Advisor (57.6% of the respondents). But, you have to take under consideration that majority of respondents (95.3%) never used any measurements or energy efficiency calculations, because they are simply not aware of such opportunities (60.5%) and expect that it is too complicated (28.2) for them. In total, 88.7% of respondents have no knowledge on support possibilities. It is a larger percentage than those who do not need a HEA help, so one should assume that some of them want to learn something about the effective use of energy in their household.

## 8. Housing summary

**Key differences in energy consumption (Q.33). Add comments to explain patterns and how they link to the project and/or method of data collection.**

The problem faced by vulnerable citizens in Poland is, on the one hand, housing without adequate thermal insulation, and second, the need to additionally heat the individual rooms with electric devices- which is both expensive and does not ultimately give a feeling of thermal comfort.

## 9. Additional comments and observations unique to each country

The survey, which was carried out, confirmed that the problem is lack of knowledge. Consumers are not aware of that, how big economic effects could be brought by simple, daily, activities of energy efficiency.

To encourage residents to cooperate with HEA, it may be necessary to show the specific benefits of introducing energy-saving activities into everyday life.

## 6.2.5 Finland Consumer Surveys

### 1. Partner details

Partner name:	<b>VaasaETT</b>
Name of region/country:	<b>Finland</b>
Key contact regarding consumer surveys:	<b>Anna Sahiluoma</b>
Email of key contact:	<b>anna.sahiluoma@vaasaett.com</b>

### 2. Data collection

Number of questionnaire disseminated	<b>24484</b>
Number of questionnaires completed	<b>4661</b>
Date of data count	<b>29.12.2017</b>

#### **Methodology:**

Previous research on energy poverty done by the Ministry of Environment in Finland ( Ympäristöministeriön raportteja 21/2013: Selvitys energiaköyhyydestä) has concluded that people most at risk of fuel poverty are of lower income households such as students, elderly, unemployed etc. with large heatable space such as detachable home. Based on the previous research the Assist survey was planned to be targeted at elderly and owners of detachable houses as e.g. most of students live on rent in apartment buildings.

The Survey was disseminated through two channels: via the Home Owners Association (Omakoti liitto ry) to their members and the Association of Elderly Welfare (Vanhustyön keskusliitto ry) via their repair advisors to elderly seeking home repair advice. The questionnaire disseminated via Home Owners Association was an online survey and the questionnaire disseminated through the Association of Elderly Welfare was a paper survey targeted at people not reachable by online survey.

Total number of disseminated surveys was 24484, of which 70 where paper questionnaires through Association of elderly welfare. In total of 4661 surveys where completed. Response rate via Home Owners association was 19 % and via Association for the Welfare of the Elderly the response rate was 41%. This gives a total response rate of 19.04%.

For comparison, the survey participants have been divided into: most at risk, vulnerable and not at risk, based on their perception of their financial situation variable (the division is shown in table below). In order to limit the bias due to the fact that people's perception

can be subjective, we have ensured that the identification of vulnerable and non-vulnerable groups was in accordance with the clustering results done for Work Package 5, that took under consideration multiple factors and used the share of Electricity/Heating costs as target-variable. The identification of people most at risk was done based on their perception of financial situation, in order to examine the ways that they differentiate from the vulnerable group.

CATEGORY	PERCEPTION OF FINANCIAL SITUATION
Most at risk	1. Not enough money for primary needs (food and energy bills)
Vulnerable	2. Enough money for primary needs, but not for non-basic expenses
Not at risk	3. Enough money for primary needs and sometimes for non basic expenses
	4. Enough money for primary needs and often for non- basic expenses

**Table 1: classification of the vulnerable based on their perception of their financial situation**

### Challenges:

The questionnaire was intended to be directed at vulnerable consumers, but as Finland does not classify specific groups as vulnerable regarding energy markets, the survey was targeted at a larger audience of people possibly at risk being energy poor/vulnerable.

Due to limitations of data available and the good response rate of the survey, the survey data was also used for the clustering analysis in Work Package 5. Comparison between the vulnerable and the non-vulnerable are represented in this deliverable, although the work package deliverable deepens the knowledge on the attitudes and wishes of the vulnerable as the short follow up survey was sent to the vulnerable identified from this survey.

### 3. What type of area do your consumers live in?

#### **Key differences in the areas where consumers live (Q.17). Add comments to explain patterns and how they link to the project and/or method of data collection.**

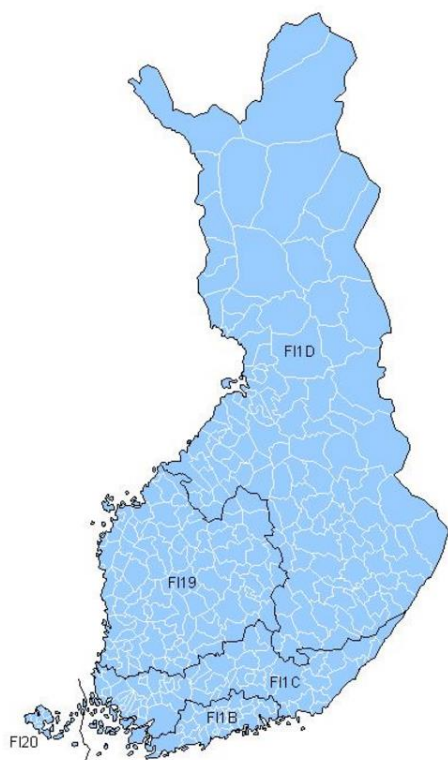
The geographical dispersion in the overall answers was wide. The respondents came from almost all regions in Finland, only Åland islands, the autonomous region of Finland was missing. 40,9% of the respondents (1783) lived in the region of Uusimaa, which is the most densely populated region in the south of Finland. This was significantly more than the share of population in that region (30.01%).

Area	%
Uusimaa	40.90%
Varsinais-Suomi	16.50%
Pohjois-Karjala	10.00%
Pohjois-Savo	5.30%
Kanta-Häme	4.00%
Kymenlaakso	3.10%
Keski-Suomi	2.60%
Pohjois-Pohjanmaa	2.50%
Satakunta	2.50%
Etelä-Pohjanmaa	2.30%
Etelä-Savo	2.20%
Pirkanmaa	2.00%
Päijät-Häme	2.00%
Lappi	1.50%
Etelä-Karjala	1.20%
Pohjanmaa	0.80%
Kainuu	0.30%
Keski-Pohjanmaa	0.10%

**Table 2: Portion of respondents from areas**

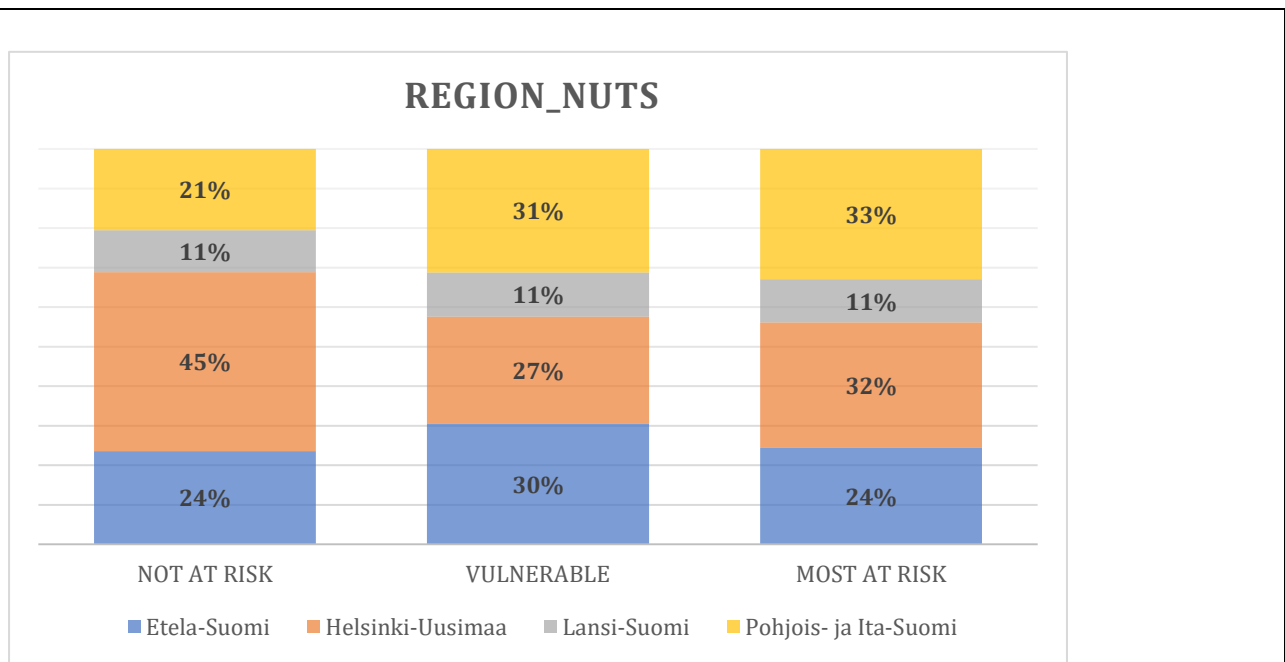
As several regions had very few responses, the regions were grouped to larger areas: the division was made based on the NUTS classification (Nomenclature of territorial units for statistics) that EU uses and based on the areas of Regional State Administrative Agencies to get even more insight.





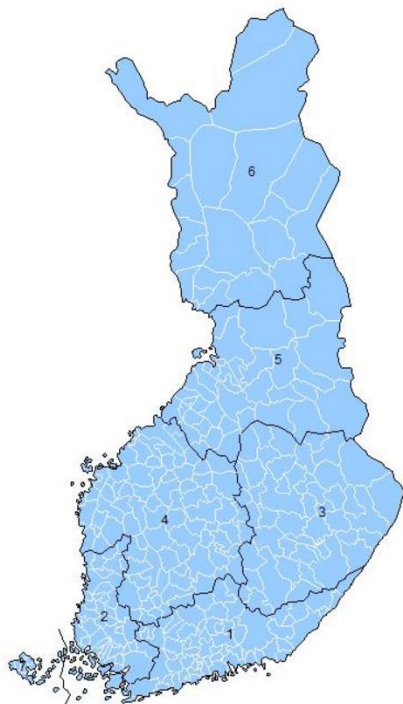
**Figure 1: Division of Finland according to Eurostat NUTS (based on population)**

Comparing the vulnerable groups with the non-vulnerable group, observation can be made that Helsinki-Uusimaa region is more represented in the non-vulnerable group. This seems to indicate what the previous studies on energy poverty in Finland have also indicated, that the risk is lower in the metropolitan area. On the contrary the vulnerable have higher portions of people living in the northern parts of Finland. As the Nuts classifies a large part of Middle, East and Northern Finland in to one area, this does not give clear picture of specific problem areas.



**Figure 2: Comparison of NUTS regions between groups**

The division based on regional State Administrative Agencies in Finland divides Finland in to six areas -two more than the NUTS classification.



**Figure 3: Division of Regional State Administrative Agencies in Finland**

The comparison between groups when division is based on the regional states, shows that Lapland and Northern Finland in particular, but also eastern and south western Finland are areas which have larger representation in the vulnerable groups.

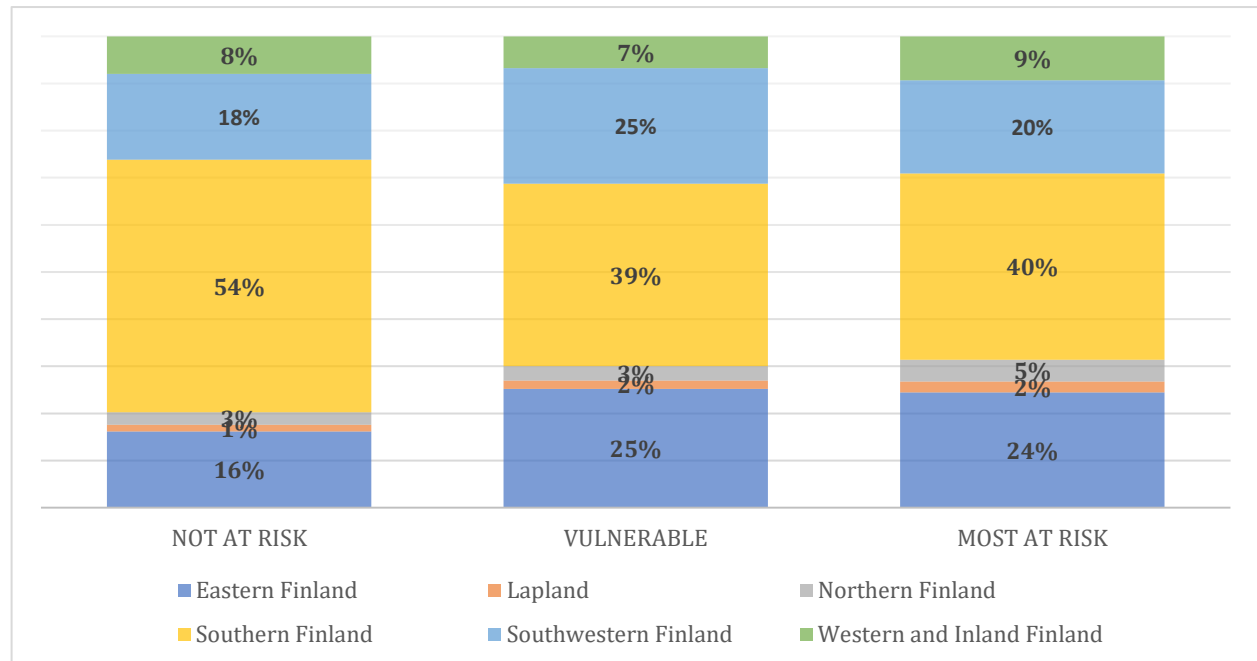
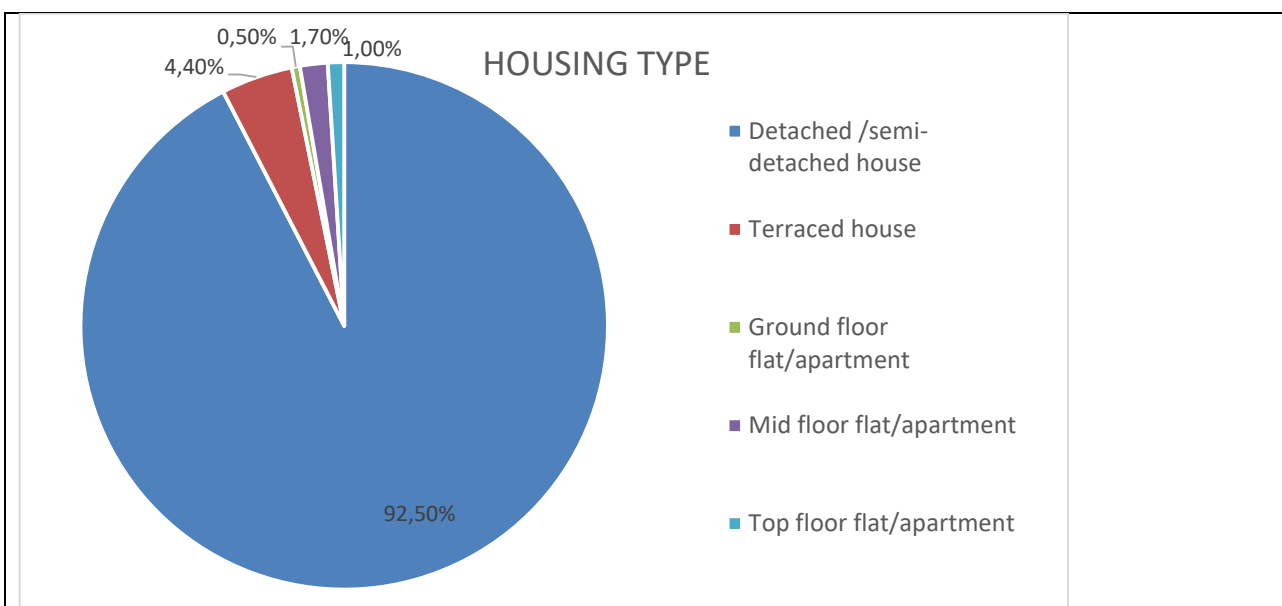


Figure 4: Comparison of Regional States between groups

#### 4. Tenure, Property type and renovation?

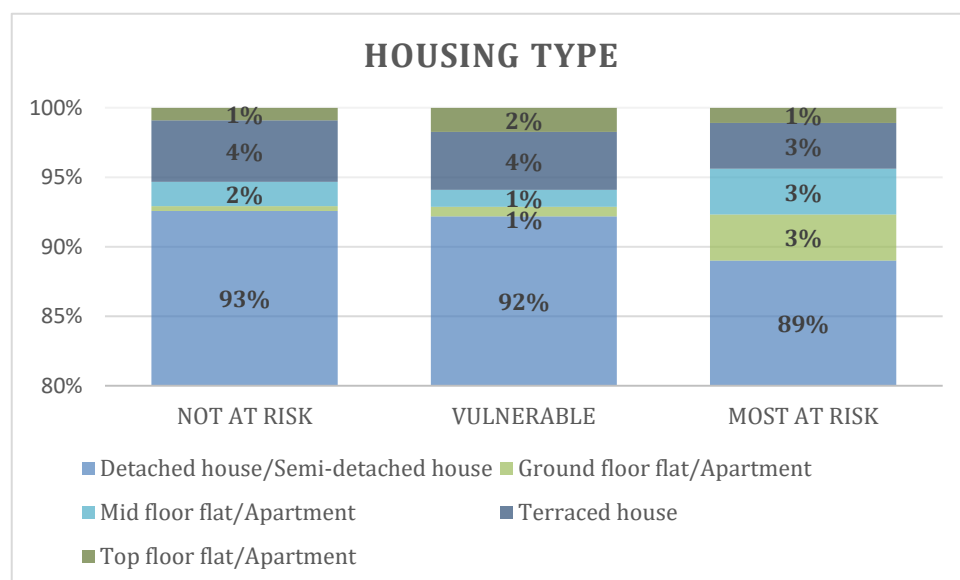
**Key differences in the tenure, type of properties and work carried out to improve the property (Q.18 – Q.21). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Due to the fact that the survey was sent through Home Owners Association the portion people living in detached /semi-detached houses is large. Less than 5% of all respondents live in apartment buildings.



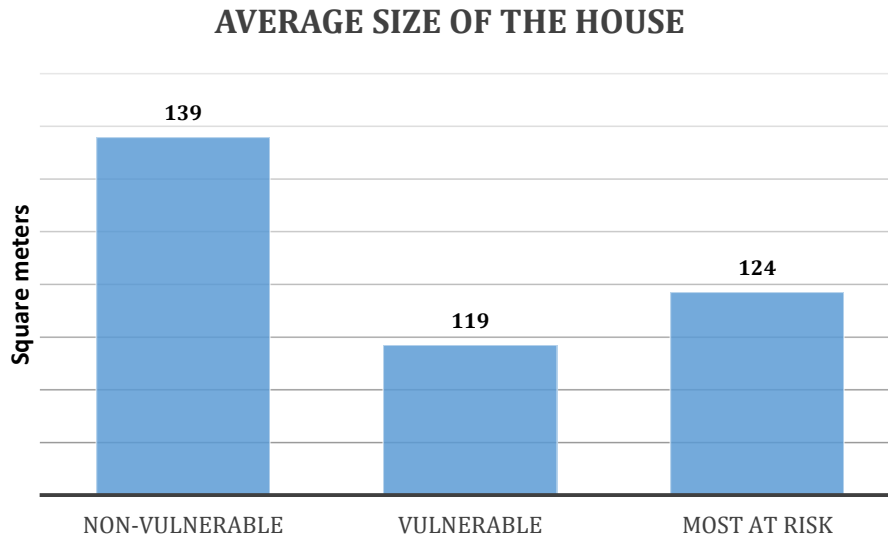
**Figure 5. Portion of housing types**

Interesting observation is that, unlike the previous studies suggest, the portion of people living in apartments is higher in the vulnerable group than in the non-vulnerable group. This is an interesting observation that most likely, especially in the most at risk group, tells more about the very small income that the households have, as the total yearly energy costs are relatively small.



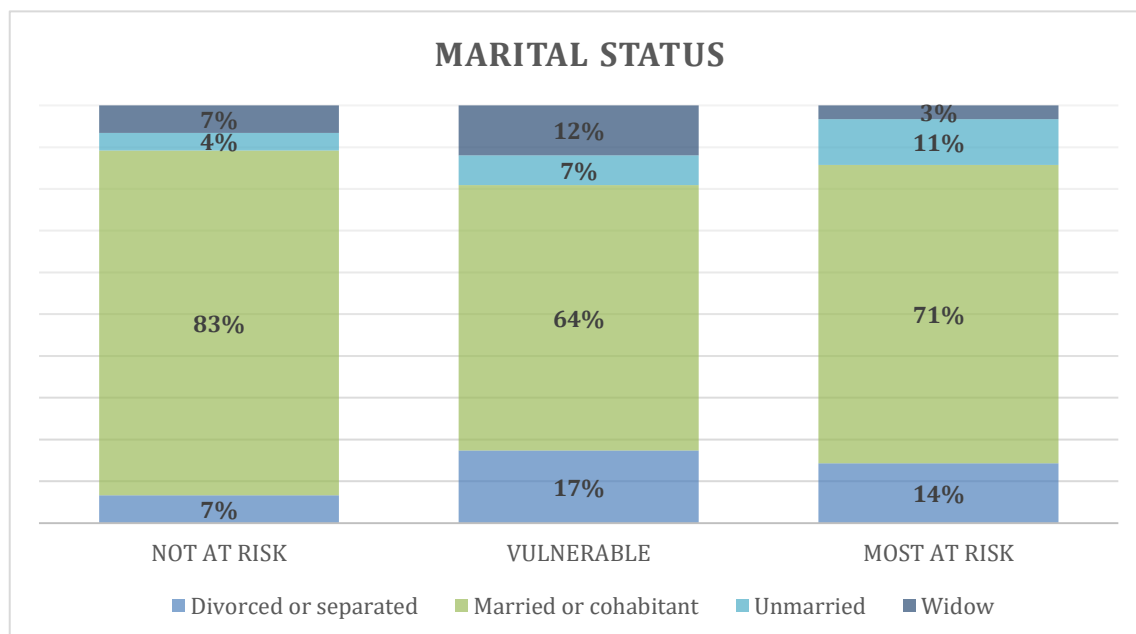
**Figure 6. Comparison of housing types between the groups**

When comparing the average house sizes, the Non-vulnerable group has the largest average square meters. But there does not seem to be a clear trend between the two vulnerable groups.



**Figure 7. Comparison of average house size between the groups**

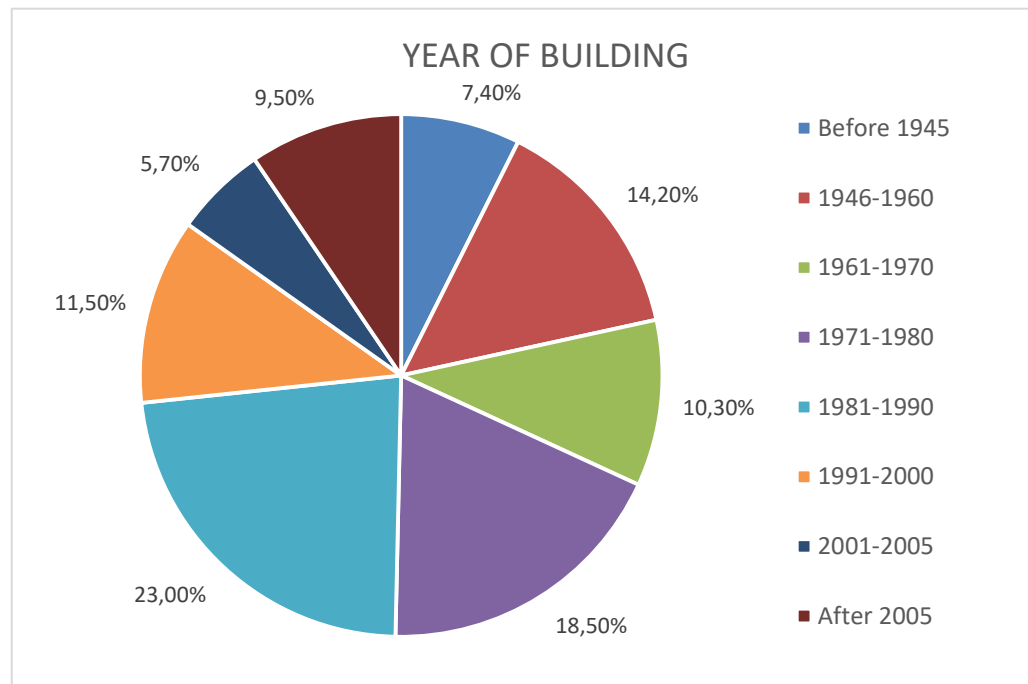
An observation to better explain the pattern between groups and their average house size, comes when comparing the marital status of the groups: it can be observed that the most at risk group has the highest portion of unmarried/single people, and the vulnerable has the highest portion of divorced or separated and widowed. This partially explains the smaller house size of the vulnerable compared to the most at risk. This can also in general signify a confirmation on, what the previous studies have also highlighted, that the people most at risk of vulnerability is higher for people living alone.



**Figure 8: Comparison of marital status between groups**

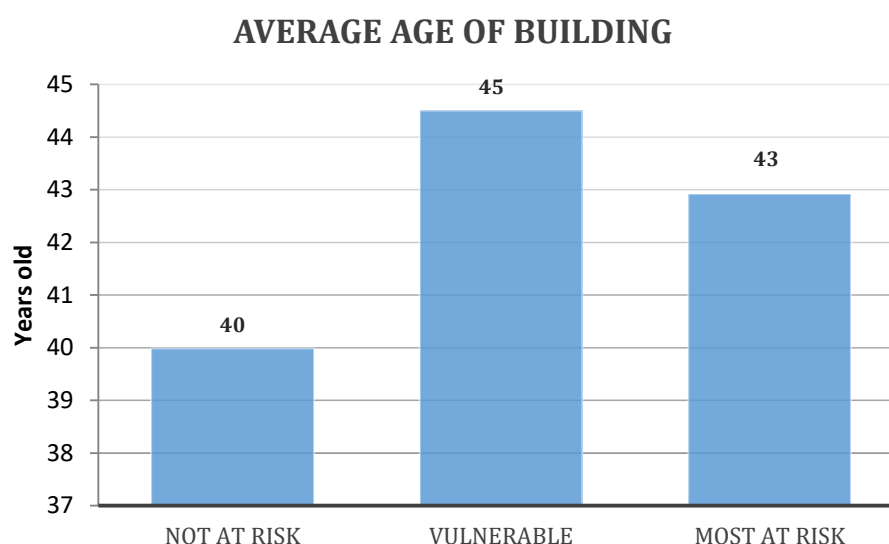
The buildings, where the survey respondents lived, varied a great deal in building year. Generally the building constructed between 1950-70 are the least energy efficient. In

houses built in the 1950s and 1960s, the insulation material used were mostly industrial by-products such as peat, sawdust, moss and coat. The portion of these buildings in the responses, was almost a quarter.



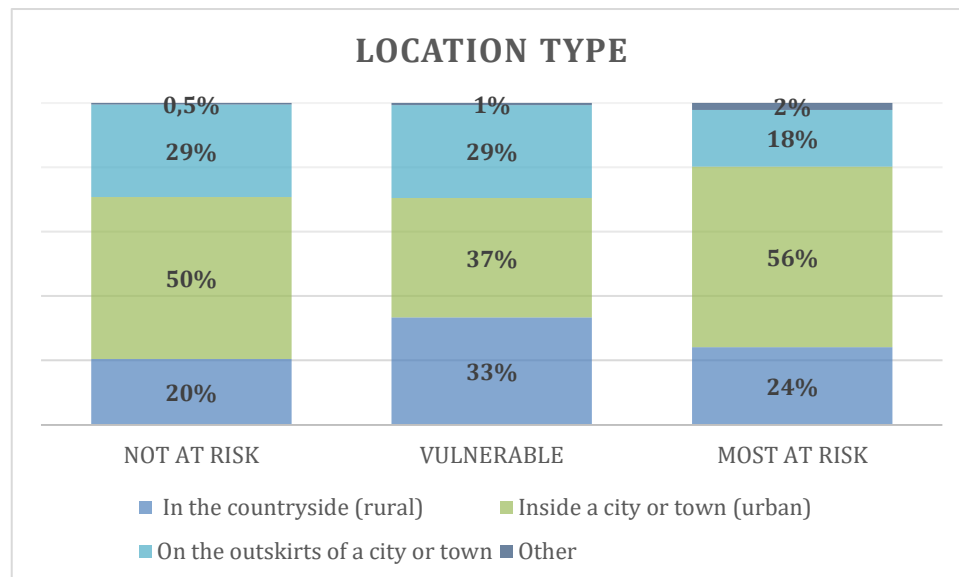
**Figure 9. The portion of building based on the construction year**

It is worth also noticing that although the non-vulnerable group has the newest housing stock when comparing the average age of the building, there is no clear trend with the two vulnerable groups.



**Figure 10. Comparison on average house age between the groups**

When comparing the location types, no clear trend was found. This is likely due to the fact that in the more rural parts of Finland even the city/Town areas are suffering from people moving the larger cities in the south and thus the location in a town does not necessarily signify a desirable location. And on the other hand, living in the outskirts of the capital area, does not make the location undesirable. The house prices in the south, especially in Uusimaa area, are manifold compared to the rest of Finland.

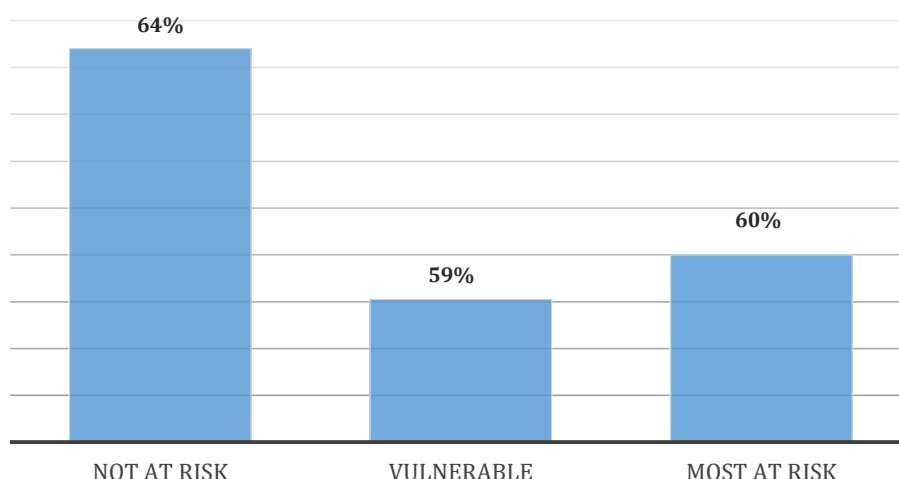


**Figure 11. Comparison of location type between the groups**

Another interesting observation comes by comparing renovations done to improve energy efficiency between the groups: the portion of the non-vulnerable that have done renovations, is higher than the vulnerable groups, even though the average house age was lower (as seen in Figure 10). Significantly smaller proportion of people in the vulnerable groups have done renovations, which indicates that the vulnerable groups might not have the means to invest in energy efficiency.



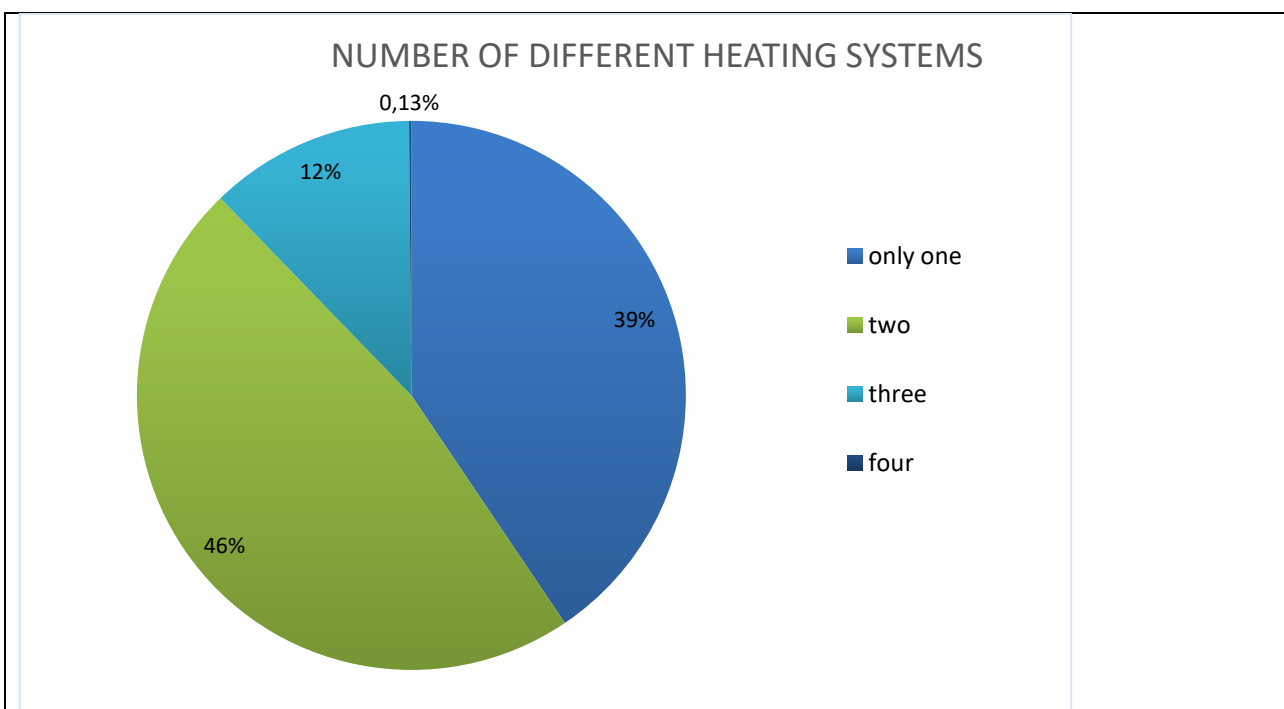
### RENOVATION TO IMPROVE ENERGY EFFICIENCY



**Figure 12. Comparison of renovations done between the groups**

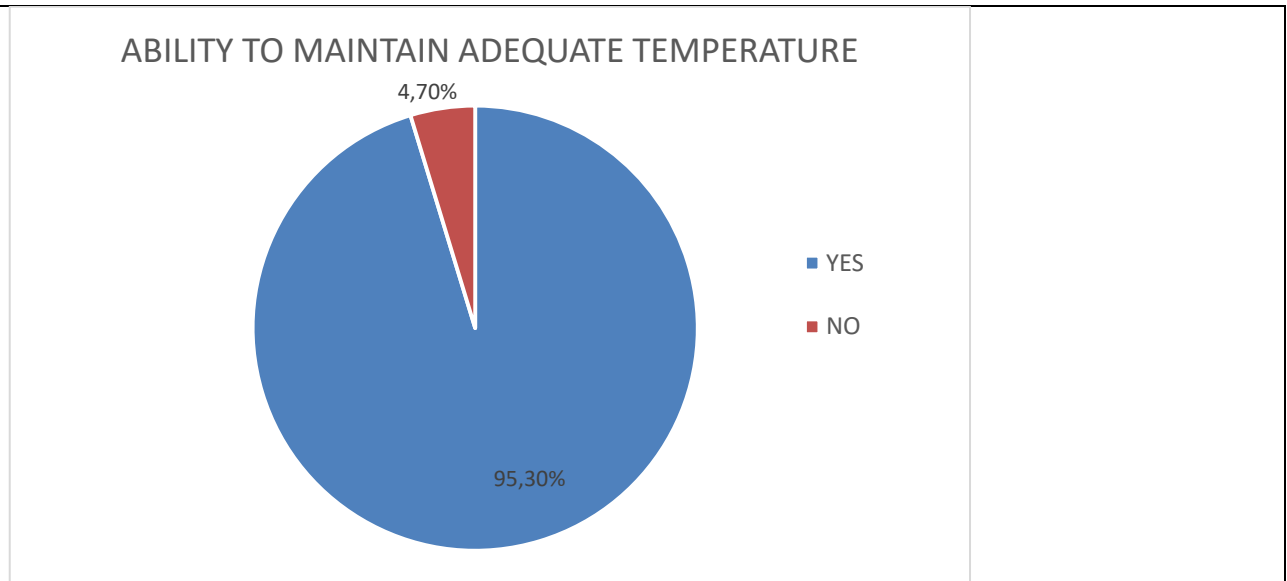
In Finland long tradition is building regulations: the first standards for the insulation of buildings came into force in 1962. The current regulations mandates that the main heating system needs to be adequately sized to keep the temperature adequate in the whole house. Houses in Finland generally have central heating systems, and detached houses very often also have secondary heating system as fireplaces and nowadays also small air to air heat pumps.

Majority of respondents in the survey had two or three heating systems: most commonly one central heating system such as floor heating, radiators, ceiling heating etc. and a fireplace, or central heating system, fireplace and heat pump. 7,5% of respondents had fireplaces and/ or Masonry oven as the only heating system.



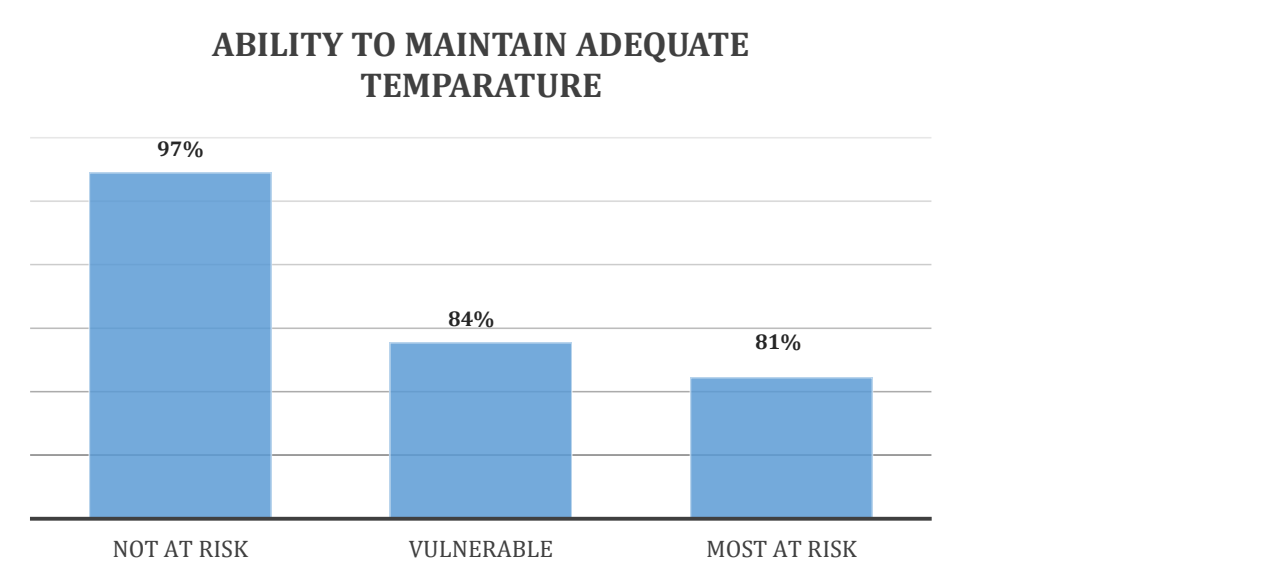
**Figure 13. Number of heating systems**

From all the survey respondents 4,7% are not able to maintain adequate temperature. The portion unable to maintain adequate temperature is higher than in EU statistics on income and living conditions (SILC) survey, where the 2016 average for all households unable to keep home adequately warm in Finland was 1,7% and the highest percentage of 4,3% was households with one adult over 65 years. Cooling is rarely needed in Finland, usually only few days/weeks a year, and thus cooling is quite rare in housing in Finland. Some respondents out of the 4,7% have stated that they are unable, and it is because of lack of heating. In Finland it also needs to be highlighted that Finns are used to warmer indoor temperatures than many Central European: the recommended indoor temperature given in the building regulations is 21 Celsius degrees. Previous studies done on housing conditions on the elderly have concluded that elderly prefer higher indoor temperature than the recommended. This should be taken into consideration when inquiring people perceptions.



**Figure 14. Portion of people unable maintain adequate temperature**

When comparing ability to maintain adequate temperature between groups, the significantly larger portion of non-vulnerable were able to maintain adequate heating. The trend is clearly downward: of the most at risk only 81% are able to maintain adequate heating. It should be noted that not even the not at-risk group everyone is able to maintain adequate temperature.

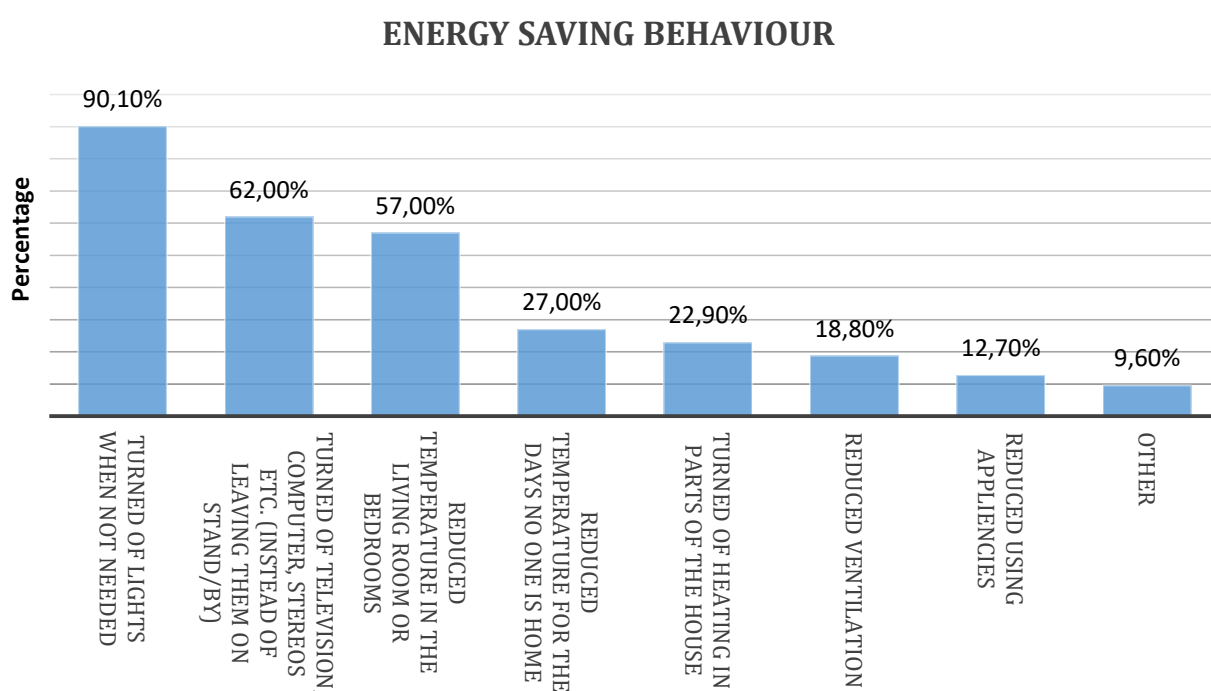


**Figure 15. Comparison of ability to maintain adequate temperature between groups**

## 5. Behaviour Change?

**Key differences in behaviour change to reduce energy consumption (Q.26). Add comments to explain patterns and how they link to the project and/or method of data collection.**

A first observation about the energy saving behaviour of the respondents is that a great majority turns off lights when not needed. Large portion also turns the power of appliances instead of leaving them on stand-by and reduces temperature for the days no one is home. It needs to be highlighted that to some extent the actions are wise in order to save energy. Although in Finland, due to the climate and generally good insulation in buildings, decreasing ventilation is risky as it might lead to mold problems. Quite a large portion of respondents had decreased ventilation in their home.



**Figure 16. Portion of energy saving behaviour**

Comparison of energy behaviour between the groups was interesting; It seemed that the non-vulnerable were more active in energy efficiency behaviour than the vulnerable groups, especially the group most at risk, which had as seen in Figures 17-24.

### AIM TO REDUCE ENERGY BILL BY CHANGING ELECTRICITY/HEATING USE

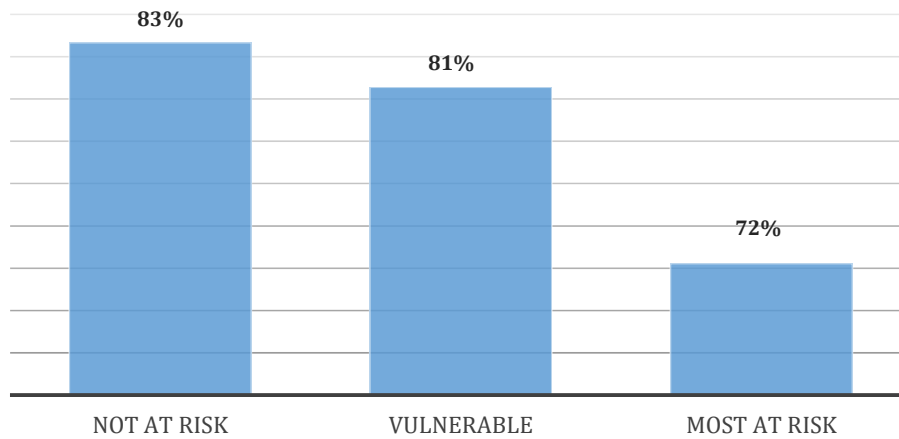


Figure 17. Comparison of energy behaviour between groups

### URNS OFF LIGHTS WHEN NOT NEEDED

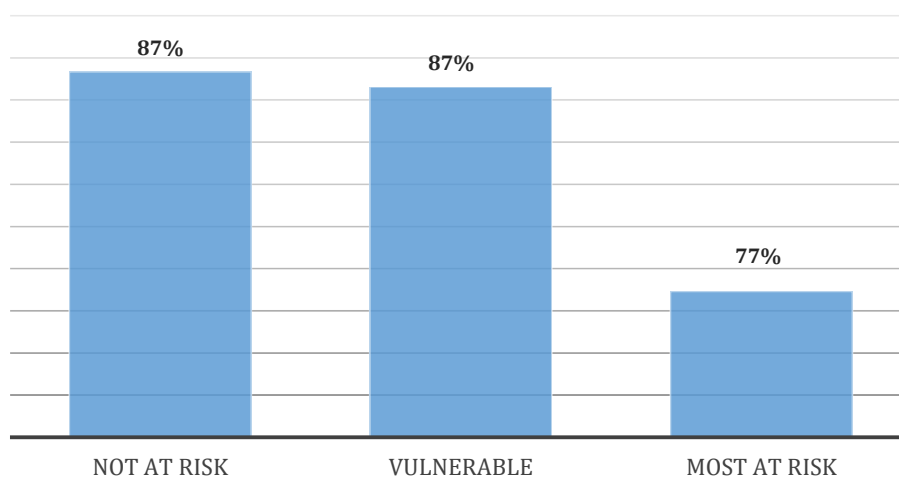


Figure 18. Comparison of energy behaviour between groups

### Turns off TV/stereos instead of standby

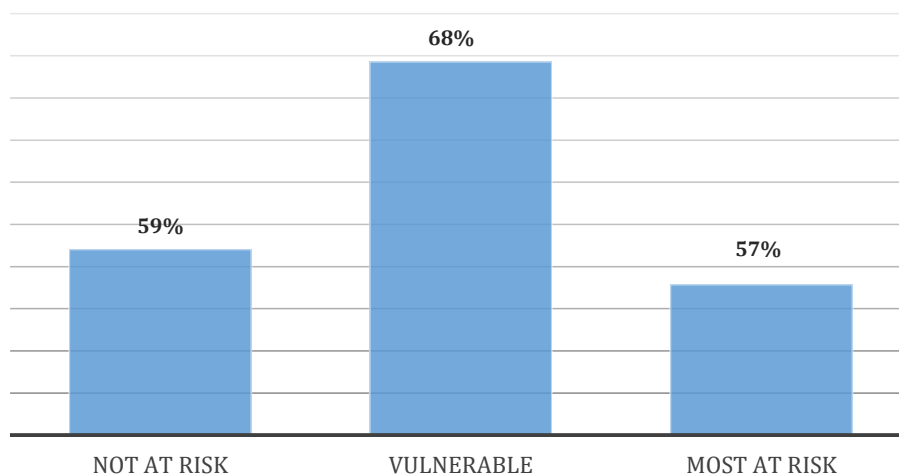


Figure 19. Comparison of energy behaviour between groups

### Switches off heating in part of the house

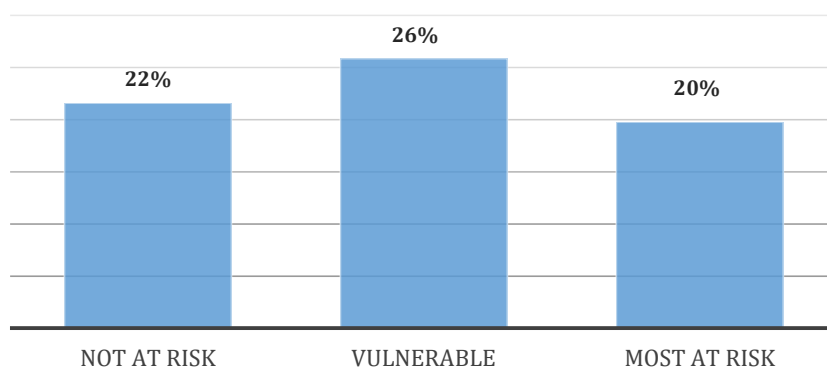


Figure 20. Comparison of energy behaviour between groups

### Reduces temperature in living / dining room or bedrooms

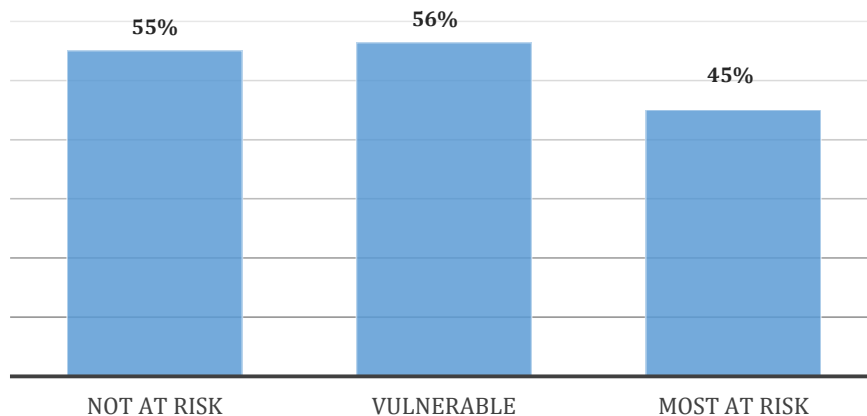


Figure 21. Comparison of energy behaviour between groups

### REDUCES TEMPERATURE IF HOUSE IS EMPTY

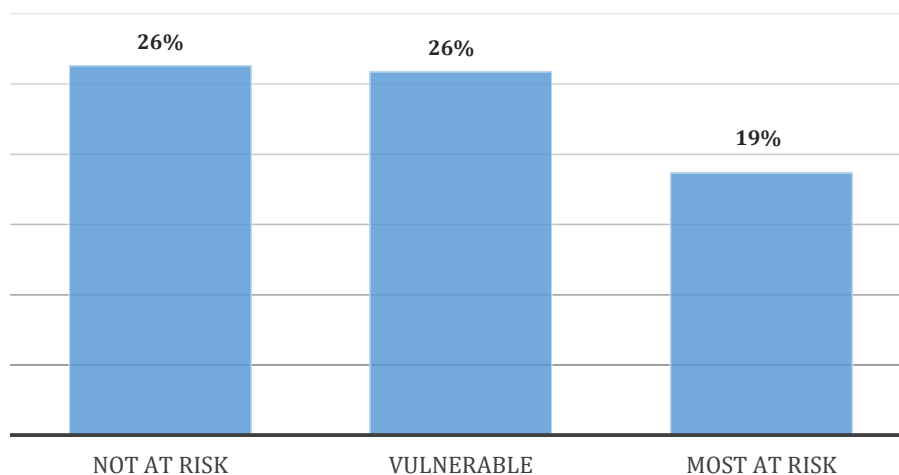


Figure 22. Comparison of energy behaviour between groups

### DECREASES VENTILATION

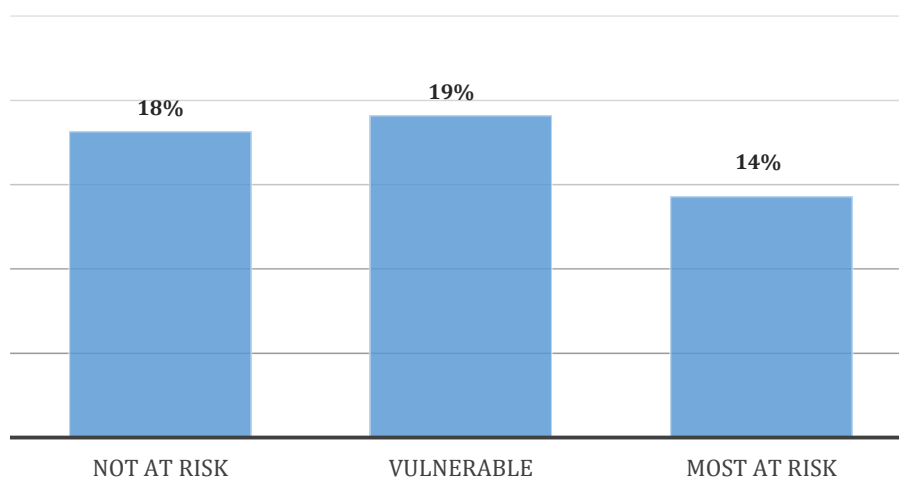
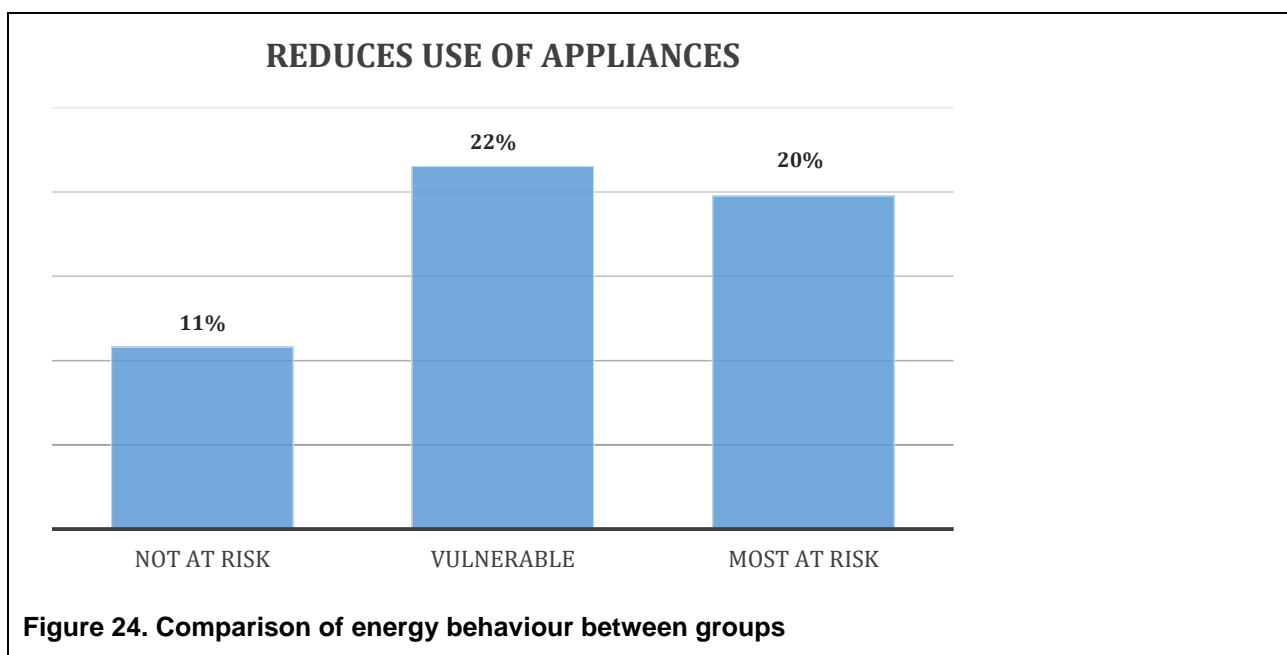


Figure 23. Comparison of energy behaviour between groups

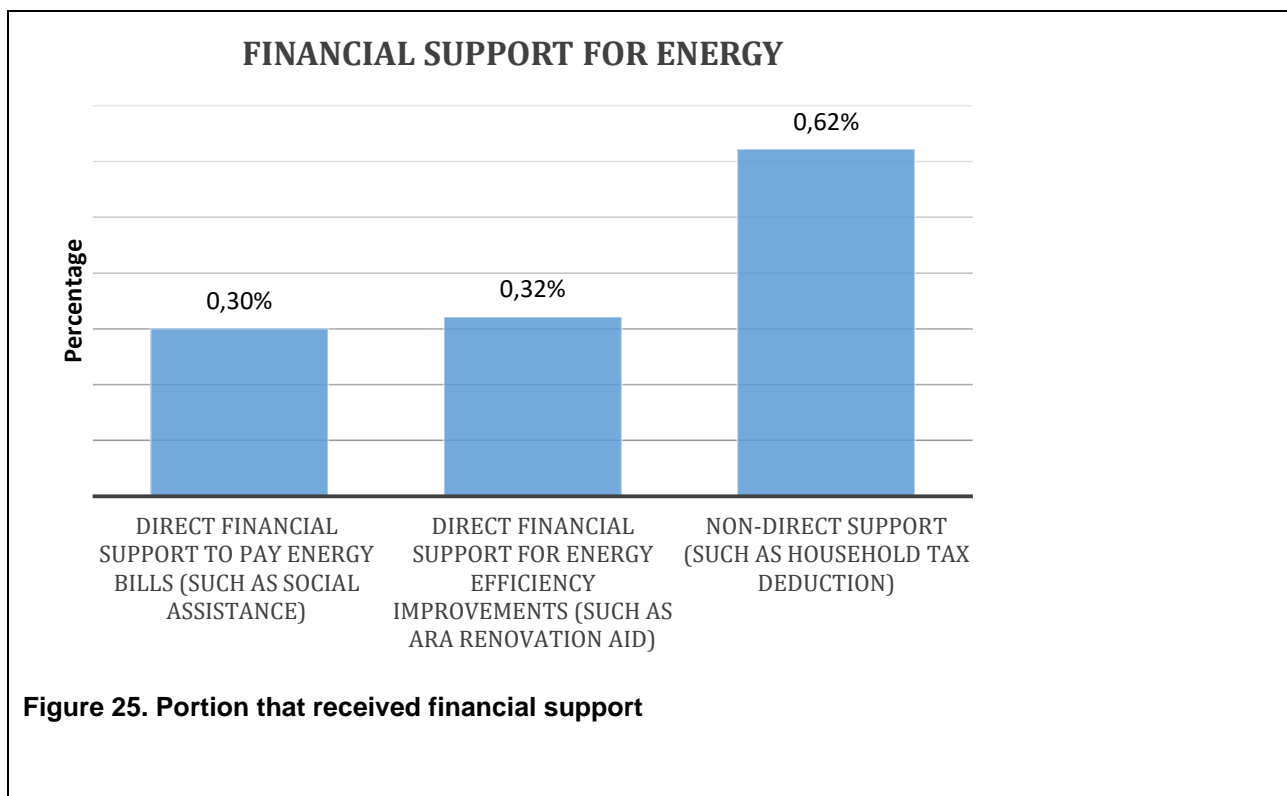


## 6. Financial Support?

**Key differences in how many consumers have received financial support in order to pay their energy costs over the past 12 months (Q.29 & Q.30). Add comments to explain patterns and how they link to the project and/or method of data collection.**

There are social benefits which people can receive to pay basic needs such as energy, these include Basic Social Assistance, Preventive Social Assistance and Additional Social Assistance. Only very small portion of the respondents, 0,3%, had received any. This indicates that the people have not sought any assistance even though they feel that they cannot afford more than, or even, the basic needs. There are also benefits that can be used in some cases for energy efficiency improvements, such as the Renovation Aid for Elderly or Disabled, only 0,32% of all the respondents had received this. The most used benefit available was the household tax deduction, which 0,62% had received.

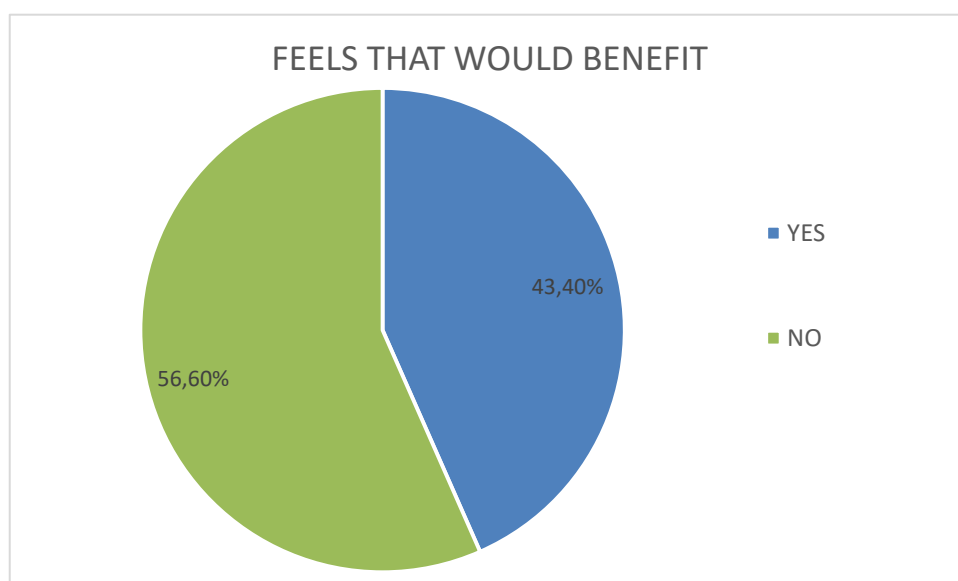




## 7. Interest in energy advice?

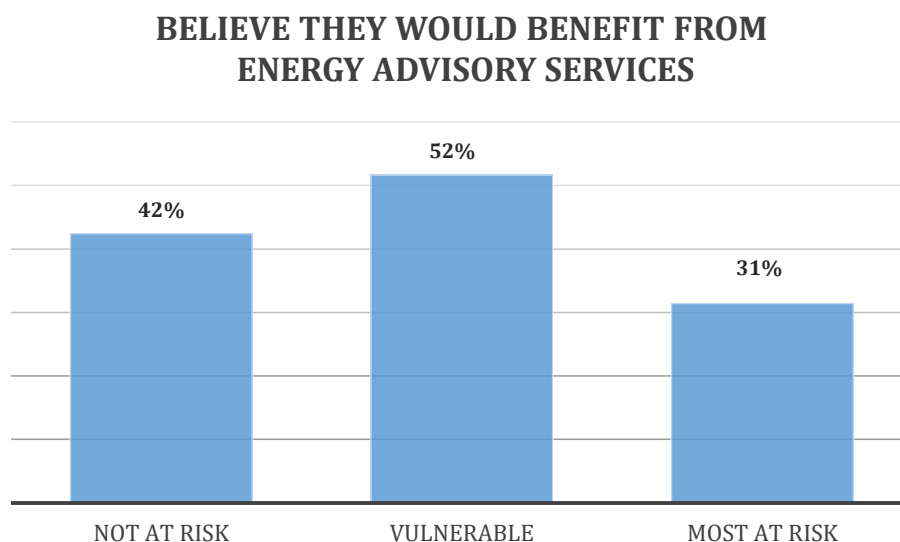
**Key differences in whether energy advice would be appreciated by the consumer (Q.31). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Less than half of the overall survey respondents felt that they would benefit from advice service such as Household Energy Advisers.



**Figure 26. Portion that feels they would benefit**

An interesting observation is that larger portion of the vulnerable group felt they would benefit that the other groups. Significantly lowest portion was in the most vulnerable group, a reason for this might be the most vulnerable might feel they do not have adequate means for any improvements.



**Figure 27. Comparison of portions that feel they would benefit between the groups**

## 8. Housing summary

**Key differences in energy consumption (Q.33). Add comments to explain patterns and how they link to the project and/or method of data collection.**

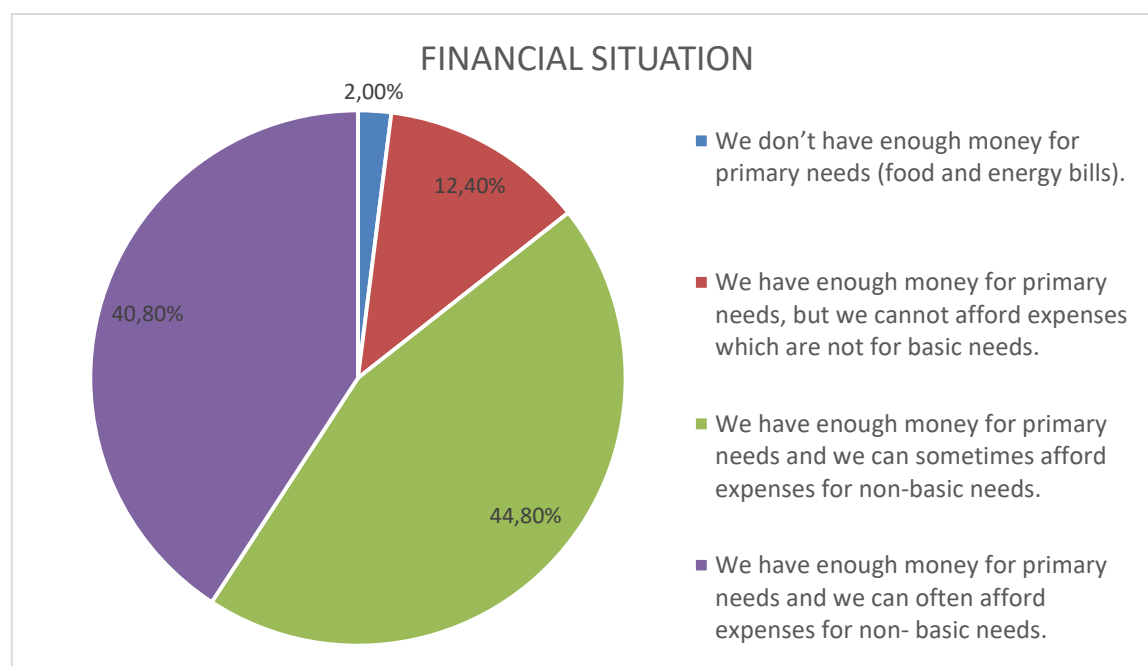
The survey respondents were from different income classes, highest portion of survey respondents were in the income class of 35000-70000 euros. The average income for single person in Finland was 3503 euros per month. The portions of respondents in different income classes is shown in table 3 below:

Household income per year	Percentage of respondents
Less than 7 500 euros	1.30%
7 501 - 15 000 euros	2.80%
15 001 - 20 000 euros	5.00%
20 001 - 26 000 euros	8.20%
26 001 - 35 000 euros	15.50%

35 001 - 70 000 euros	44.90%
70 000 - 100 000 euros	15.20%
100 001 - 200 000 euros	6.70%
More than 200 000 euros	0.50%

**Table 3. The portion of respondents in each income class**

The perception of their financial situation varied, majority felt that either can afford the primary needs and sometimes non-basic needs (44,80%) or that they can afford primary needs and often non-basic needs (40,80%). 12% felt that they had enough money for primary needs but could not afford anything more and 2% felt they could not afford the basics.



**Figure 28: The portions according to perception of their financial situation**

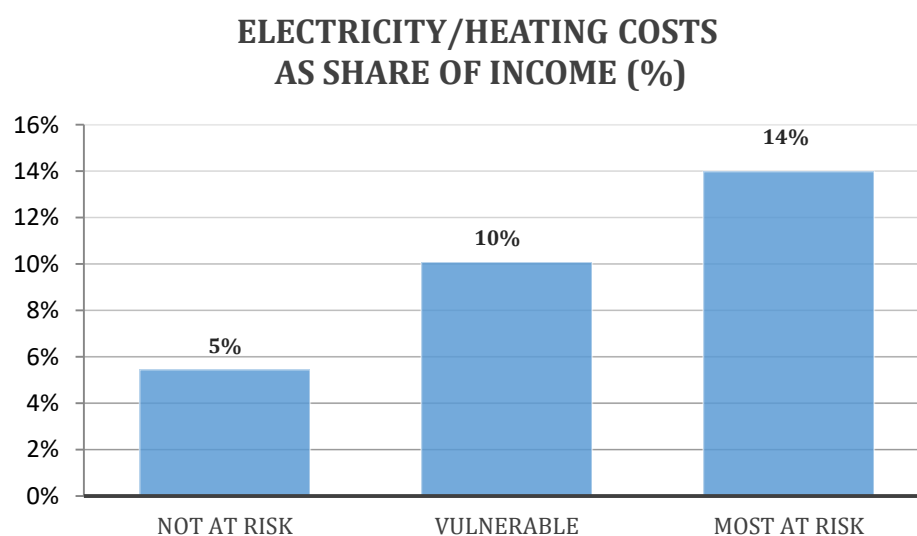
As described previously the respondents were divided into two vulnerable groups: most at risk, vulnerable and to a third groups comprising with the non-vulnerable, based on their perception of their financial situation variable (the division is shown in table 1). In order to limit the bias due to the fact that people's perception can be subjective, we have ensured that the identification of vulnerable and non-vulnerable groups was in accordance with the clustering results done for Work Package 5, that took under consideration multiple factors and used the share of Electricity/Heating costs as target-variable.

In total the two vulnerable groups had 669 people: 577 in the vulnerable and 92 in the most at risk group. The rest of the 4661 survey respondents were considered not at risk.

The amount of money the households spent on total energy costs differed from couple of hundred to thousands per year. The high dispersion is due to the fact that in people living in distinctly heated apartment buildings pay heating as part of rent, and only energy the them selves pay is electricity used for lighting and appliances. The total energy costs were also compared to household's annual income (as seen below).

$$\text{Annual Electricity and Heating costs as share of income (Electricity/Heating costs)} = \frac{\text{Cost of Electricity} + \text{Cost of oil} + \text{Cost of gas} + \text{Cost of solid fuels} + \text{Other fuel costs}}{\text{Average annual income}}$$

When comparing the energy costs as share of income, it can be seen that the portion is significantly higher with the vulnerable groups, but there is also significant difference between the vulnerable that think they have enough money for basic needs and the people who feel they cannot afford even the basics as seen in figure 13.

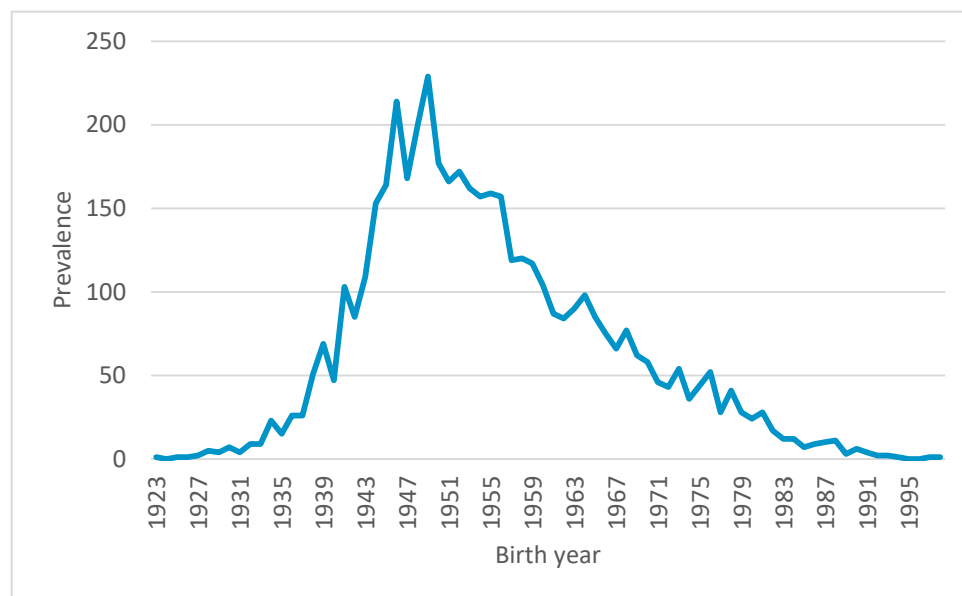


**Figure 29. The comparison of energy costs as share of income**

## 9. Additional comments and observations unique to each country

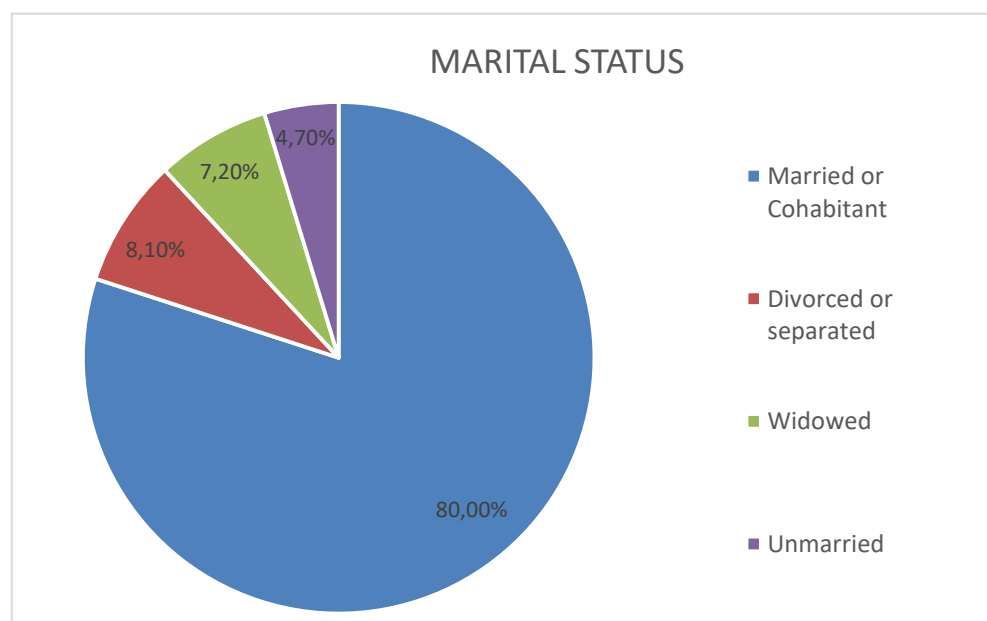
Interesting observations were made of the respondents. Majority of respondent to Assist survey were of older age classes: the average age was 62 years. 48,3% of respondents were 65 or older and 51,7% were between 15 and 64 years. Although the survey through Association for Elderly Welfare was targeted at elderly, the survey respondents through

Home Owners Association were also of older age. The members of Home Owners Association are more evenly distributed in different age groups. Possible reason for a large amount of elderly people responding to the survey might be that retired people, tend to spend more time at home and have more time answering surveys. On the other hand the high portion of elderly could also signify that the issue of managing with energy costs and possible energy poverty concerns them more than others.



**Figure 30: the prevalence of birth year**

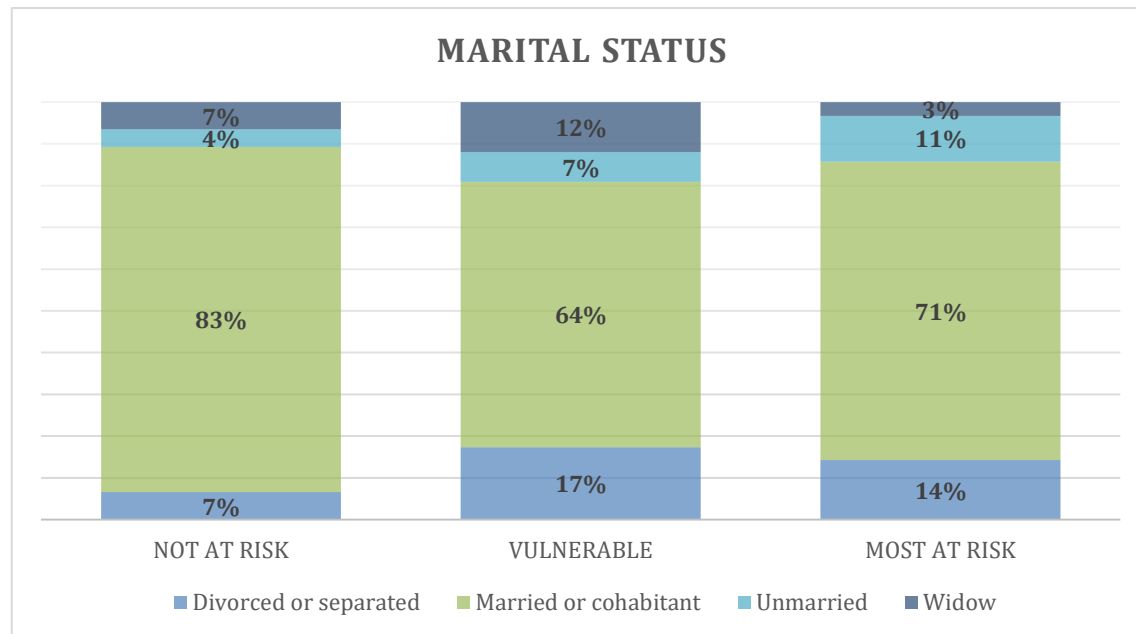
Majority, 80,0% of respondents were married or cohabitant. 8,2% were divorced, 7,2% were widowed and 4,7% unmarried.



**Figure 31: Portions of marital statuses**

When comparing the people not at risk to the vulnerable groups, it can be observed that the most at risk group has the highest portion of unmarried, and the vulnerable has the

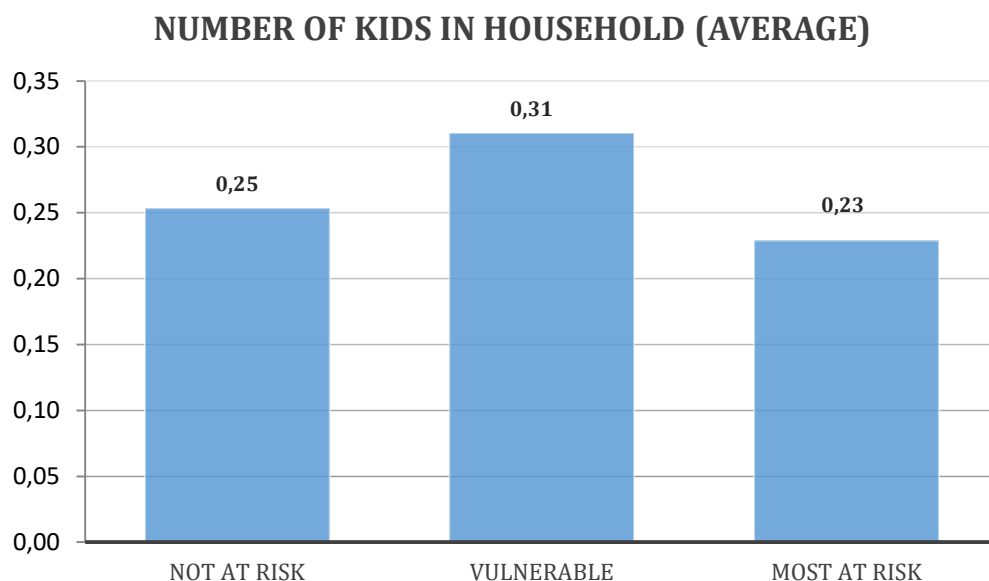
highest portion of divorced or separated and widowed. This can be interpreted as a confirmation on, what the previous studies have also highlighted, that the people most at risk of vulnerability is higher for people living alone.



**Figure 32: Comparison of marital status between groups**

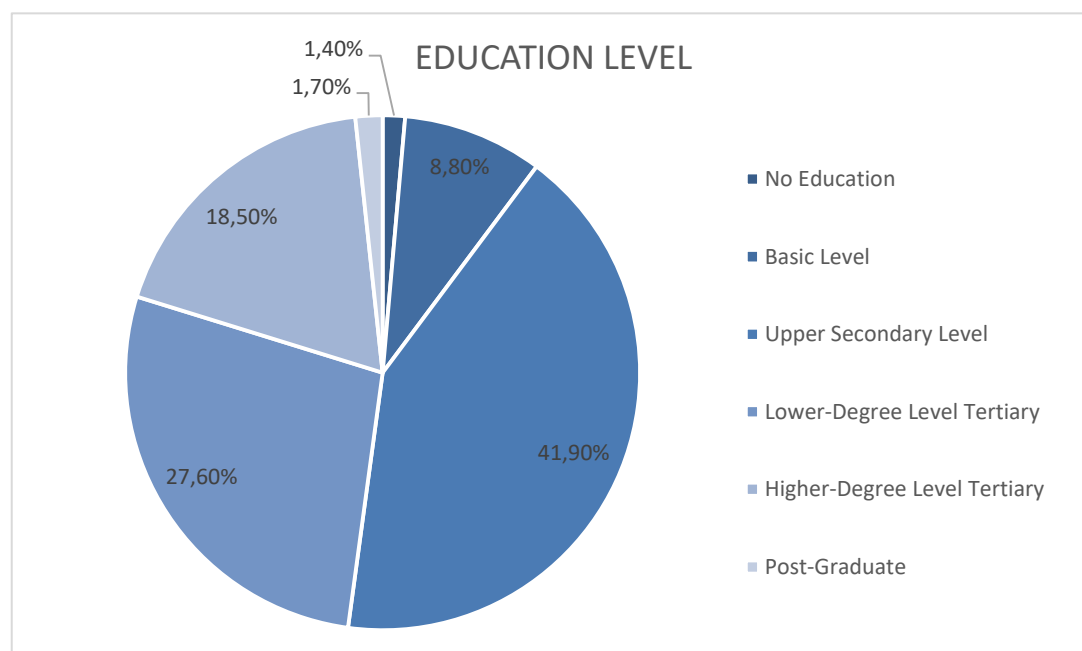
As described previously, the survey respondents average age was high, which meant that the number respondent that had under 15 year old children was low: 86,2% of respondent household didn't have children under 15, the portion of respondent who had one child under 15 in their household was 5,8%, almost as many, 5,7% had two under 15 year olds and 1,8% had three under 15 year olds, the remaining 0,5% had more than 3. The average number of kids in the households was 0.2436.

When comparing the number of kids in the household between the vulnerable groups and the non-vulnerable group, it can be observed that the number of kids is larger in the vulnerable groups but slightly lower in the people most at risk. No clear conclusions can be of this as the portion of households with kids is relatively low.



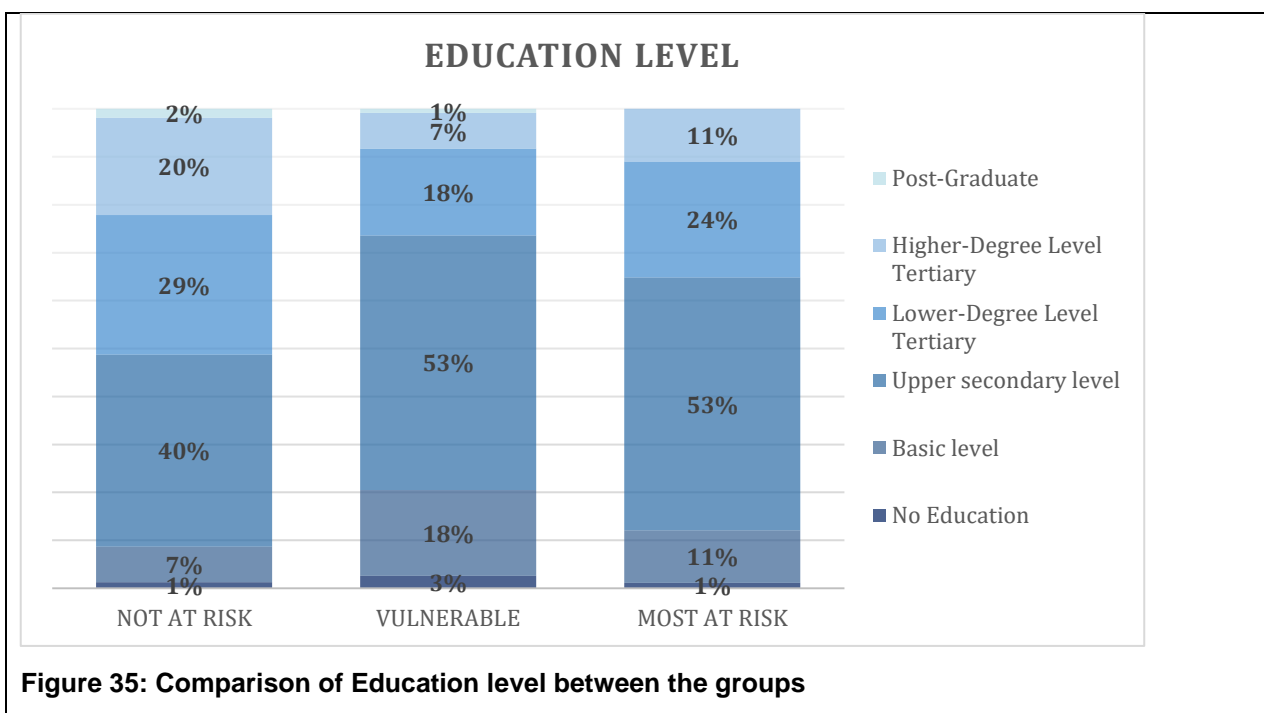
**Figure 33: Comparison of number of kids between the groups**

The survey respondents were from all education levels.



**Figure 34: Education level**

When comparing the vulnerable groups and the non-vulnerable, a first observation is the fact that higher proportions of people from lower education levels were in the vulnerable and the people most at risk (as seen in graph below).



## 6.2.6UK Consumer surveys

### 1. Partner details

Partner name:	<b>Severn Wye Energy Agency</b>
Name of region/country:	<b>UK</b>
Key contact regarding consumer surveys:	<b>Rob Hargraves</b>
Email of key contact:	<b>robh@severnwyenergy.org.uk</b>

### 2. Data collection

Number of questionnaires disseminated	<b>951</b>
Number of questionnaires completed	<b>150</b>
Date of data count	<b>05/12/2017</b>



### Methodology:

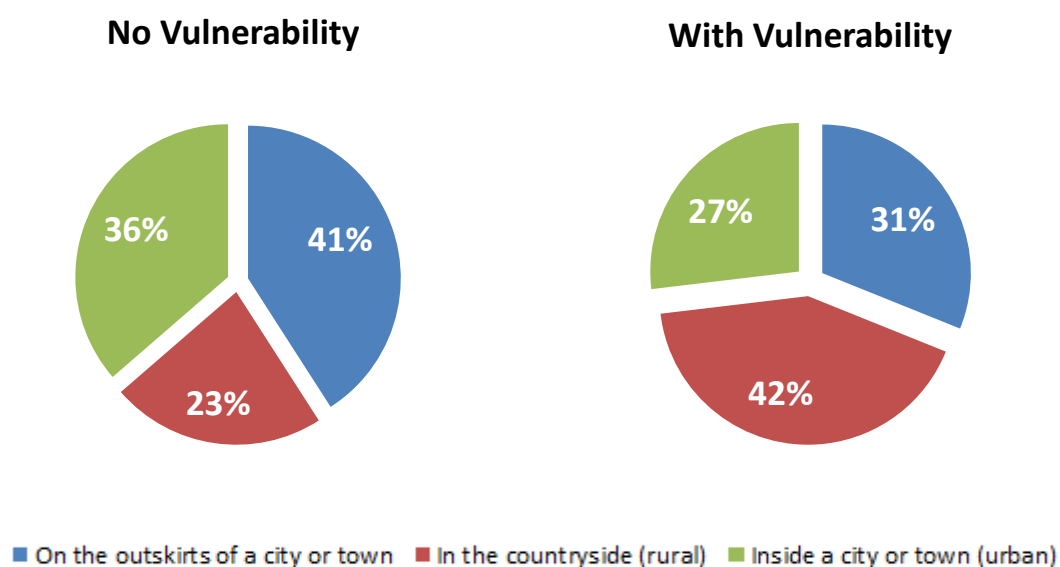
- Asked face to face with clients on home visits
- Copies of surveys distributed at training sessions
- Questions were asked over the phone
- Surveys were sent by email to existing clients from stored data on the client database.

### Challenges:

- Some found the survey was time consuming, particularly when asking the clients face to face or over the phone.
- Some of the questions were confusing to clients in the way they were written.
- Response rate was low to emails.

## 3. What type of area do your consumers live in?

**Key differences in the areas where consumers live (Q.17). Add comments to explain patterns and how they link to the project and/or method of data collection.**



Those with a vulnerability are more likely to live in a rural setting, whilst the majority of people without a vulnerability live on the outskirts of a town.

#### 4. Tenure, Property type and renovation?

**Key differences in the tenure, type of properties and work carried out to improve the property (Q.18 – Q.21). Add comments to explain patterns and how they link to the project and/or method of data collection.**

100% of the non- vulnerable consumers surveyed owned their own homes and 78% of them lived in a detached or semi-detached house.

79% of vulnerable consumers owned their own homes, 15% privately rented and 4% lived in social housing. A larger proportion lived in terraced houses/bungalows, and flats (39%).

#### 5. Behaviour Change?

**Key differences in behaviour change to reduce energy consumption (Q.26). Add comments to explain patterns and how they link to the project and/or method of data collection.**

Behaviours to reduce energy consumption were similar across all consumer types.

- 74% of people switch off the lights when they are not needed.
- 64% reduce the temperature in the home if no one is staying there

Vulnerable consumers are more likely to switch off the heater in rooms they are not using (5% vs 52% non-vulnerable), whereas non-vulnerable consumers are more likely to completely switch off appliances as opposed to leaving them on standby (70% vs 46% vulnerable).

#### 6. Financial Support?

**Key differences in how many consumers have received financial support in order to pay their energy costs over the past 12 months (Q.29 & Q.30). Add comments to explain patterns and how they link to the project and/or method of data collection.**

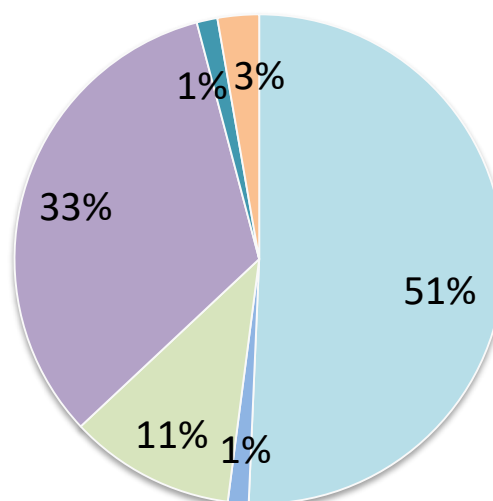
Only vulnerable consumers have received financial support towards their energy costs.

- 18% received financial support to pay bills (e.g Warm Home Discount)
- 16% received support and/or grants to implement energy efficiency measures.

Those who did not receive support primarily stated that this was because they didn't satisfy the criteria or were not aware of the opportunities.

### Reasons why vulnerable consumers not receiving financial support towards energy costs

- I don't satisfy the criteria
- I am not interested
- Other (please specify)
- I am not aware of these opportunities
- I benefitted from financial support in the past but decided not to request it anymore
- The procedure is too complicated and discouraging



## 7. Interest in energy advice?

**Key differences in whether energy advice would be appreciated by the consumer (Q.31). Add comments to explain patterns and how they link to the project and/or method of data collection.**

54% of vulnerable consumers would appreciate help from a Home Energy Advisor, compared with only 38% of non-vulnerable consumers.

The key things vulnerable consumers would like help with are

- Reducing the cost of energy bills
- Reducing energy consumption without reducing level of comfort
- Increase the level of comfort in the home

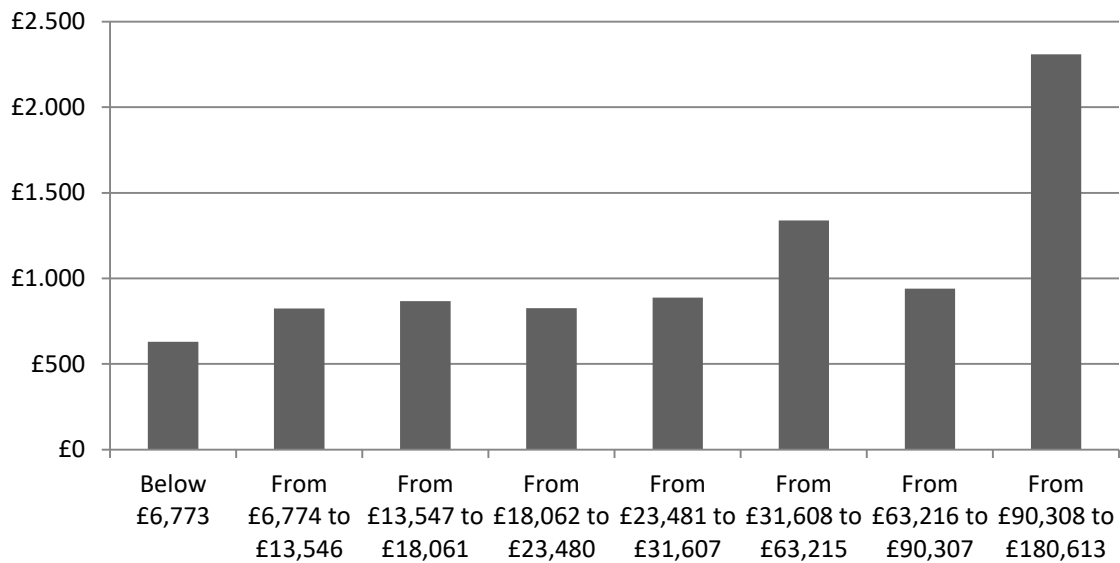
Non – vulnerable consumers would also appreciate help to reduce the cost in energy bills but also to have a positive impact on the environment.

## 8. Housing summary

**Key differences in energy consumption (Q.33). Add comments to explain patterns and how they link to the project and/or method of data collection.**

People on higher incomes typically spend more on their energy bills

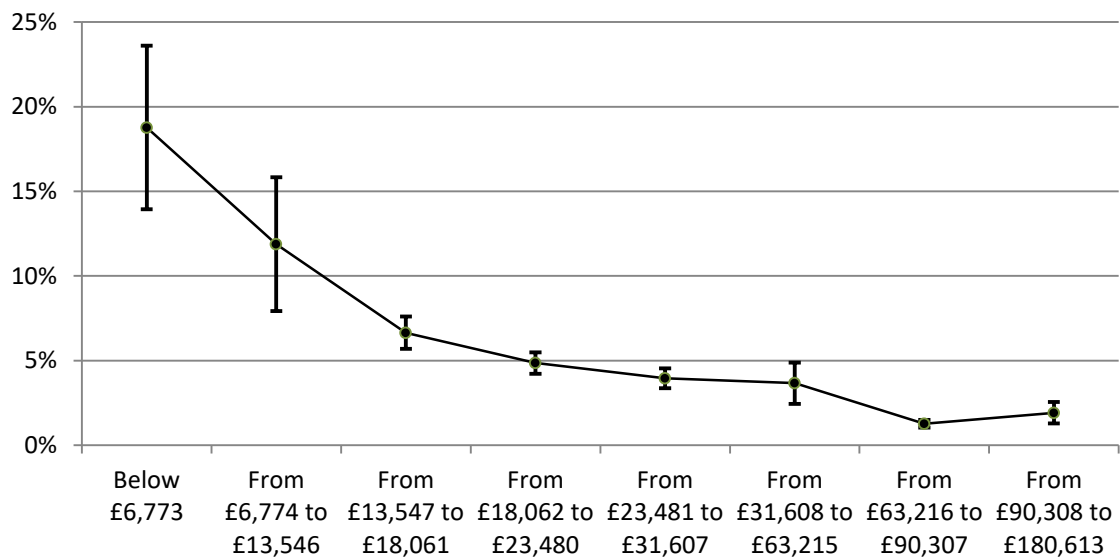
**Average annual energy costs**



However, the percentage of income spent on fuels is significantly higher for people living on low incomes.

Of those with the lowest income, up to 25% of annual income is spent paying for fuel bills, whilst

**% fuel bills of income**



## 9. Additional comments and observations unique to each country

Not all questions were answered by all consumers.



[www.assist2gether.eu](http://www.assist2gether.eu)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 754051