STEP

Solutions to Tackle Energy Poverty

TARGETING ENERGY POOR CONSUMERS REPORT

ABOUT THE PROJECT

Solutions to Tackle Energy Poverty (STEP) is a project to develop a simple, innovative and replicable model of measures to address energy poverty.

The project covers some of the countries with the highest rates of energy poverty in Europe. These are Bulgaria, Cyprus, Czech Republic, Latvia, Lithuania, Poland, Portugal, Slovakia and the United Kingdom.

There are three specific objectives:

- To get consumer groups and frontline organizations, who advise people on a range of issues such as financial or health-related ones, to partner and deliver advice to energy poor consumers.
- To help energy poor consumers across the 9 countries save energy and improve their living standard. We will advise consumers on more efficient energy consumption and how this can help them save money and improve their health and well-being. We will carry out information campaigns, provide tips on how to save energy, demonstrate cost savings and help put in place low-cost energy efficiency measures.
- To disseminate best practices and policy choices that can alleviate energy poverty and promote their replication in other EU countries.

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INTRODUCTION

The data available on energy poverty is still sparse and different concepts are used across EU Member States. Some countries do not even have a legal definition. There is also no agreed definition of energy poverty at European level, so EU countries have adopted various criteria based mostly on economic vulnerability.

In order to implement a project on energy poverty, the STEP's partners decided that there was a clear need to recognize and study the relevant data made available at a National and European level, in order to fully comprehend the issue at stake, before the development of further activities.

This report sets out how the research was conducted, provides individual summaries of the partners' results and presents a comparative analysis of the results across the nine partners' countries. Each partner in the project played an important role in the research and the collection of available data, reports and figures on energy poverty in their respective countries.

There are two annexes to this Report: "Defining Energy Poverty in STEP Project Countries" and the "Summary of Available Support Schemes".

"Defining Energy Poverty in STEP Project Countries" was developed through a survey applied nationally to a wide range of entities, such as social housing institutions, anti-poverty networks, social services, energy agencies, municipalities, academics and other stakeholders. The aim was to gain an overview of the national energy poverty situation and to define the target groups for each partner.

The definitions of energy poverty in each target country will feed into the development of the STEP Training Modules and will be an important source for every partner to tailor their local/regional activities and adjust the STEP training modules to their national/local circumstances.

The "Summary of Available Support Schemes" outlines the existing support mechanisms for consumers in each project country and the criteria/barriers that apply to these schemes.

"Targeting Energy Poor Consumers" Report and its annexes provides a framework for the upcoming activities of the project."

TARGETING ENERGY POOR CONSUMERS

RESEARCH METHODOLOGY

The first activities of the STEP project involved the research on energy poverty literature and data amongst the partners' countries. The research was conducted by each partner at national level with the guidance of the work package leader. Guidelines on how to conduct the research were provided to each partner to help facilitate their responses to the research questionnaires.

A sample of the guidelines is presented in Annex 1.

This report provides an analysis of the partners' responses for each of the partners' countries. The last section of the report presents a comparative analysis of the responses.

Guidelines Part I:

The first group of questions in the guidelines address the issue of a definition for energy poverty, since at EU-level there isn't an agreed definition yet. With respect to individual STEP countries, some have adopted a legal concept while others have not. Partners decided that this was a priority issue for discussion within STEP, since it is essential to clearly and fully understand what issues STEP will address before the launch of the project's activities.

Guidelines Part II:

The second part of the guidelines address the diagnosis and causes of energy poverty in STEP countries. Partners also provided information on the extent and composition of energy poverty in their countries. Since data is sparse in some countries, partners were encouraged to check and use the data available on the EU Energy Poverty Observatory. Partners were also asked to address any gender differences relating to energy poverty.

Guidelines Part III:

The third group of questions address the mapping of available measures and/or policies at a national level to prevent or reduce energy poverty. Partners were also asked to present their thoughts on why there was a lack of any national measures to tackle energy poverty in their countries. The responses to these questions will help inform STEP's lobbying activities, a key element of the STEP project.

Guidelines Part IV:

The last part of the research addresses the sources of information and data available at a national level on energy poverty. Partners were also asked to list the national stakeholders currently working on the issue. The results of these questions are presented in Annex 2.

Bulgaria

STEP Partner: BNAAC (Bulgarian National Association Active Consumers)

I – ENERGY POVERTY DEFINITION

In Bulgaria there isn't a legal definition for energy poverty. Consequently, all matters linked to the issue are addressed through broader social policies.

Despite the lack of an energy poverty definition, there are policies regarding social support for heating purposes during the winter season (November to March). No support is provided for cooling. Social measures are focussed on assisting people whose average monthly income for the past six months is lower than the differentiated minimum income. This policy is part of the National programme called "*Targeted social assistance for heating*"[1].The programme was introduced by Ordinance No. RD-07-5 of May 16, 2008, which established the conditions and procedures for granting targeted assistance for heating.

In addition, the government is implementing energy efficiency measures for housing, projects and developing programmes that involve municipalities and non-governmental organizations. These projects are funded by the state budget or co-financed by the European Commission, for example *The National Programme for Energy Efficiency of Multi-Family Residential Buildings*.[2]

While Bulgaria does not have a legal definition, there are programmes that address the energy poor and help support energy poor consumers. Given the mechanism to support consumers during winter, it is clear that the main criteria to determine beneficiaries is income.

In BNAAC's view, Bulgaria's energy poverty policies focus on income support and fails to address the other underlying factors, such as poor housing conditions. The measures included in the "*Targeted social assistance for heating*" programme, only provide short term household budget support and won't be effective for overcoming energy poverty. The measures and the scope of the stakeholders of Ordinance No. RD-07-5 of May 16, 2008 can be redefined constantly. This undermines predictability in this social sector.

[1] http://www.asp.government.bg/web/guest/about/-/asset_publisher/gGchKUMwkm0t/content/uvelicava-se-razmer-t-na-celevata-pomos-za-otoplenie-za-sezon-2019-2020-g-i-se-razsirava-dost-p-t-do-nea/maximized?_101_INSTANCE_gGchKUMwkm0t_redirect=%2F

[2] https://www.mrrb.bg/en/energy-efficiency/energy-efficiency-of-multi-family-residential-buildings-national-programmeme/

With respect to *The National Programme for Energy Efficiency of Multi-Family Residential Buildings*, the targeted groups are not clearly defined. Households affected by energy poverty are not a priority. Consequently, we consider the programme isn't intended to be an instrument to tackle energy poverty in the country.

BNAAC considers that the main reason behind the lack of a legal energy poverty definition in Bulgaria is that the energy market in the country is not liberalized. The government keeps the energy prices low for the households and the price difference is paid by the industry. This policy is considered as assistance to those vulnerable to poverty. In fact, this policy is affecting in a negative way the balance of the whole energy system in Bulgaria. There is a lack of integrated approach for tackling the energy poverty. Currently, this strategy only focuses on the consequences of the problem and is not addressing the causes of energy poverty.

With respect to their position on the need for a common European definition for energy poverty, BNAAC gives a positive answer. The partner supports the evidence presented in a considerable body of literature that there are three main components to energy poverty: low household income; growing energy prices; inefficient energy performance of buildings concerning thermal insulation, heating systems and equipment. This opinion is also adopted by the European Energy Network (EnR)[3].

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

Due to the lack of an energy poverty definition in Bulgaria, BNAAC focused their response on the support mechanisms available in the country for vulnerable consumers.

There are financial and non-financial mechanisms in Bulgaria to support vulnerable consumers. The financial mechanism is defined by Ordinance No. RD-07-5 of May 16, 2008. Since July 2019 the number of targeted groups has grown from 17 to 20. The scope of assisted people and families has been expanded by increasing the individual coefficients to access the targeted assistance. The biggest increase is for the 'at risk' groups - the elderly, and especially those living alone, disabled people and parents with children receiving education. The aim of this policy is the maintenance of children in the education system, therefore, three new target groups were introduced.

Non-financial measures include: 1) the creation of a registry for vulnerable consumers, and for people on life-support equipment to be protected from disconnection; 2) the prohibition to suspend electricity supply, during the winter for a period of 30 days after payment deadline, for consumers with over 90% reduced ability with an assistant; 3) the possibility for debt restructuring; 4) information campaigns; 5) objective and reliable online platforms; and 6) the establishment of a code of ethics for suppliers of utilities. Non-financial mechanisms are regulated in Article 3 of the Public Service Obligations and Client Protection Obligations of Directive 2009/72 / EC and are a mandatory element of the social package of the Member States[4].

[3] http://enr-network.org/wp-content/uploads/ENERGYPOVERTY-EnRPositionPaper-January-2019.pdf
[4] http://osi.bg/downloads/File/2016/energy5.pdf

According to BNAAC's research there are three major factors that undoubtedly determine Bulgaria's high level of energy poverty - an outdated and energy-inefficient housing stock, very low-income levels in real and absolute terms and the fast-rising prices of energy.

Although the price of electricity in Bulgaria is the lowest in the EU it is proportionally higher relative to the incomes of Bulgarian households. The implication of this situation is that Bulgaria is experiencing serious difficulties in providing affordable and sustainable energy services, especially for low-income households. This negative process is expected to continue in the coming years with the forthcoming liberalization of the energy market in Bulgaria.

Therefore, (in the sharp imbalance between income and electricity prices and in view of the forthcoming price liberalization), there is a significant risk that impoverishment will continue, and there will be an increase in the level of disparity with other Member States over the coming years.[5]

According to Ordinance No. RD-07-5 of May 16, 2008 in Bulgaria there are 20 groups of people who are vulnerable to energy poverty: old people that live alone over 65 years; disabled people with more than 50% disability; an orphaned child, in condition it is enrolled in school; a single parent raising a child or children attending school;

When it comes to numbers of consumers affected by energy poverty, the Bulgarian Agency for Sustainable Energy Development provides unofficial statistics in the *EnR Position Paper on Energy Poverty in the European Union* - January 2019: The paper states that 40% of the energy users cannot keep their homes adequately warm and more than 10% of their household income is spent on energy bills.[6]

During the last winter season (2018-2019), the overall number of cases of individuals and families who were supported with targeted assistance for heating was 209 647.[7]

The statistics on the proportion of people living below the poverty line who have difficulty meeting their energy needs in Bulgaria in 2014[8], show that:

- Arrears on energy bills (%) – 52.8%
- Inability to keep the home warm (%) – 66%
- Houses with leaks and wet walls (%) – 28.5%

Regarding the data from EU Energy Poverty Observatory – indicators:

- Share of (sub-) population having arrears on utility bills, the statistics show that in 2016 around 28.7% of the Bulgarian population had difficulties paying its utility bills on time.

[5] http://www.esc.bg/bg/activities/opinions?start=9
[6] http://enr-network.org/wp-content/uploads/ENERGYPOVERTY-EnRPositionPaper-January-2019.pdf, (p.11)
[7] http://www.asp.government.bg/web/guest/about//asset_publisher/gGchKUMwkm0t/content/uvelicava-se-razmer-t-na-celevata-pomos-za-otoplenie-za-sezon-2019-2020-g-i-se-razsirava-dost-p-t-do-nea/maximized?_101_INSTANCE_gGchKUMwkm0t_redirect=%2F (p.11)
[8] Energy Poverty in Bulgaria, 2016, Report of the Open Society Institute, Sofia, p.6 at: osi.bg/downloads/File/2016/energy4.pdf

- Share of (sub-) population not able to keep their home adequately warm, the statistics show that in 2016 around 41.3% of the Bulgarian population had difficulties to keep their homes adequately warm.
- People at risk of poverty or social exclusion (% of population) - The statistics show that in 2016 around 40.4% of the Bulgarian population were in risk of poverty or social exclusion.

According to the research there isn't any available data regarding gender issues related with energy poverty. However, the National Statistical Institute (NSI) provides data about the people living in poverty and specifically regarding gender differences. According to a survey from 2017, 22% of the Bulgarian population considers itself poor. 669,800 of men and 851,000 of women in Bulgaria consider themselves poor. Thus, a higher number of women are affected by energy poverty.

When asked about the main causes for energy poverty in Bulgaria, BNAAC presented the following evaluation:

	Level of importance
Energy inefficient building construction	Most Important
Energy inefficient heating systems	Most Important
Low income	Most Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Very Important
High energy prices	Very Important
Lack of knowledge and information on energy efficiency	Important
Location (urban, rural)	Less Important
Climate conditions	Less Important

Fig.1 Assessment of main causes for energy poverty in Bulgaria
Grade of importance: Not important < Less important < Important < Very important < Most important

III – MEASURES

Below is a list of measures directed to tackling energy poverty in Bulgaria:

- National programme "*Targeted social assistance for heating*". The programme is regulated by Ordinance No. RD-07-5 of May 16, 2008. This programme was created by the Ministry of Labour and Social Policy. The Social Assistance Agency is responsible for implementing the programme.

- The *Energy Efficiency of Multi-Family Residential Buildings National Programme* has been oriented to the renovation of multi-family residential buildings with the main objective to secure better living conditions for the residents in the multi-family residential buildings, heat

comfort and higher quality of the living environment through the implementation of energy efficiency measures. By Decree No. 18 of February 2, 2015, the Council of Ministers adopted

this support mechanism. The Ministry responsible for implementing this programme is the Ministry of Regional Development and Public Works.

- The project "*Bulgarian Municipalities Work Together to Improve Air Quality*" is part of the Programme "Life" of the European Commission. The participants are Sofia Municipality (20,000 households), Burgas, Veliko Turnovo, Ruse, Stara Zagora and Montana municipalities. A request for financial assistance can be submitted by any household on the territory of the respective municipality using solid fuel for heating purposes (firewood and coal). The main objectives are the replacement of old solid wood stoves with a greener alternative to improve environmental air quality by designing, demonstrating and implementing a mechanism for transition to alternative urban heating in cities, improving administration capacity and raising awareness of stakeholders and the general public.

- The Sustainable Energy Development Agency participate in the European Energy Network-ENR and in the drafting of the EU Energy Poverty Network's Position. EnR is a network of national energy agencies in 26 European countries. Members of ENR agreed to conduct a European-level study on energy poverty issues and draft a position of the Network with analysis and recommendations for implementing policies and measures to combat energy poverty.

- The Ministry of Energy is the central administration that develops and implements the state policy in the field of sustainable energy development and on energy poverty issues.

In conclusion BNAAC considers that there are measures, policies, programmes and projects indirectly addressing energy poverty issues in Bulgaria. However, BNAAC considers that there is no unified and targeted government policy for tackling energy poverty.

Cyprus

STEP Partner: CCA (Cyprus Consumers Association)

I – ENERGY POVERTY DEFINITION

In Cyprus, according to the Article 93(6) of Cypriot Regulation No 122(I)/2003, the Minister of Energy, Commerce and Industry, after consultation with the Cyprus Energy Regulatory Authority (CERA), issued a decree which defined energy poverty as concerning consumers who are in a difficult position because of their low income, as evidenced by tax declarations in conjunctions with their professional status, marital status and special health conditions, and therefore are unable to meet the costs of the reasonable need of electricity supply, as these costs represent a significant proportion of their income. According to the Ministerial Decree (Act 289/2015), under the concept of energy poverty fall the recipients of public assistance provided by the Social Welfare Services of the Ministry of Labour and the beneficiaries of guaranteed minimum income provided by the Welfare Benefits Administration Service of the Ministry of Labour. The following categories of consumers must be Cypriot citizens or citizens of another EU-country or from the European Economic Area or citizens with equal rights to the above, who are legally residing in the areas controlled by the Republic of Cyprus. The Ministerial Decree recognizes as "vulnerable consumers" the following categories:

- Large families: For the purpose of this tariff a large family is defined as a family that receives Child Benefit from the Welfare Benefits Administration Service of the Ministry of Labour, Welfare and Social Insurance for three or more dependent children and with an annual combined family income of up to €51,258. The annual combined family income criterion is increased by €5,126 for every additional child over the number of four.
- Public Assistance recipients from the Social Welfare Services of the Ministry of Labour, Welfare and Social Insurance.
- Beneficiaries of Guaranteed Minimum Income provided by the Welfare Benefits Administration Service of the Ministry of Labour, Welfare and Social Insurance.
- Beneficiaries of Severe Motor Disability Allowance from the Department for Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance.
- Beneficiaries of Care Allowance for Quadriplegic Persons from the Department for Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance.
- Beneficiaries of Care Allowance for Paraplegic Persons from the Department for Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance.

- Haemodialysis patients who are beneficiaries of the Mobility Allowance from the Department for Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance.
- People suffering from multiple sclerosis (MS) who are registered members of Cyprus Multiple Sclerosis Association.

When asked about CCA's opinion on the definition adopted in Cyprus, the partner responded negatively and presented the following justification.

The definition must be extended to include the improvement of energy efficiency standards in building and transport policies. Improving the energy efficiency performance of housing is an issue of strategic importance when it comes to tackling energy poverty. Energy renovations may seem more expensive than other measures to combat energy poverty, since they require greater initial investment (which typically, vulnerable households cannot afford), but they also provide the most remarkable long-term gains in energy bills, contribute substantially on indoor air quality improvement and offer short payback periods, especially in cold climate zones. An innovative social policy must combine energy, environmental and social aspects, in order to address the problem holistically, but it must also be adaptable on different social groups' needs and people experiencing poverty.

The development of a new strategy for smart, green cities, integrating buildings to changes in the energy model and emphasizing the synergies achieved by doing this, is a prerequisite for the success of the above-mentioned actions. Also, Cyprus is one of the European Countries with the worse performance in keeping residences adequately warm. Another study demonstrated that social housing in Cyprus built between 1982-2008 did not have any kind of thermal insulation apart from double glazing, whereas low income households were found to live in low indoor thermal quality conditions. Energy legislation must be taken as a package with consumers at its heart: because tackling climate change, ending energy poverty, providing training and finance for a just transition to a low-carbon economy and improving energy efficiency are all different parts of the same thing - securing energy justice. Europe needs to be a leader in tackling climate change, in revolutionizing the way we use energy – and we can achieve this if we put our citizens first.

Regarding the partner's views on the need to adopt a common EU definition for energy poverty, CCA believes that a common EU-level definition of "energy poverty" may give the problem better visibility at the Member State level. Given the body of empirical evidence that shows energy poverty is both prevalent across Europe, and has wide-ranging societal impacts, coupled with the slow-moving policy developments described above, it is argued by some that a pan-European definition is a necessary catalyst for the alleviation of "energy poverty". Indeed, many of the driving factors of "energy poverty" transcend national boundaries. For instance, energy prices at the national level are influenced by global oil prices, EU mandated climate change levies and obligations, and European-wide liberalization of gas and electricity markets. Increases in extreme weather patterns, which affect heating and cooling demand, can be partially attributed to global greenhouse gas emissions and associated climate change. Similarly, national wealth, employment opportunities and poverty levels are all shaped to some extent by globalization and the increasing integration of many European economies, principally via the Eurozone. Overall, we identify three main arguments in favour of

developing a common EU definition of fuel poverty, namely: recognition, clarification and policy synergy.

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

According to article 93(6) of the rule 122(I)/2003, The Minister of Energy, Commerce and Industry, shall, after consultation with CERA, issues an order setting out energy poverty, which may pertain to the condition of consumers, who may be in an unfavourable position, due to their low income, as derived from their tax return form combined with their occupational status, their family status and special medical conditions, and are therefore unable to cover the costs of their reasonable needs in electricity supply, since these costs represent a significant part of their disposable income.
For the purposes of this Law and of the electricity supply, vulnerable consumers may be included in the following categories of customers:

- economically weak household customers suffering from energy poverty;
- customers who, either themselves or their spouses or persons who are pursuant to the law under their guardianship and share a dwelling with them, are to a great extent dependent upon the continuous and uninterrupted energy supply. This category includes customers who require mechanical support and, in particular, persons in need of continuous electricity supply for the operation of life support or monitoring devices, indicatively, devices for the mechanical support of respiratory or cardiac function, dialyzers and any device of a similar nature;
- the elderly who have completed their 70th year of age provided they do not share a dwelling with another person who has not reached the above age limit;
- customers with serious health problems, especially persons with serious physical or mental disability, intellectual disability, serious sight and hearing or mobility problems, or with multiple disabilities or with chronic illness and who for this reason are unable to manage and negotiate their contractual relation with the supplier;
- customers in remote areas entitled to receive the same services in terms of price and quality, security of supply and transparency of contractual terms and conditions as other customers.

Depending on the difficulties faced by each category, additional measures may be taken to protect such consumers, especially the provision of reduced tariffs or a discount on the published tariffs of each supplier, the installation of prepayment meters, more favourable payment terms of bills, alternative access methods to customer and bill payment services and the prohibition of disconnection of such consumers in critical times.

The criteria, conditions and the procedure applied for inclusion of a customer in a Vulnerable Consumer category shall be determined by a Minister's Order, after consultation with CERA and the Minister of Labour and Social Insurance. CERA shall control and monitor the fulfilment of the obligations provided for Vulnerable Consumers and may impose sanctions in case of breach of such obligations.

According to CCA's research the causes for energy poverty in Cyprus are considered to be a combination of high energy prices, low income and energy inefficient homes (in particular influenced by the age, condition and materials of the building envelope and energy efficiency of appliances).

However, residential status (owner/tenant) and the heating/cooling system are also factors which influence the capacity to invest in improvements. People on low incomes often live in housing with poor insulation and frequently use second hand or old equipment with poor energy efficiency. They often have to pay for their electricity and gas with pre-payment systems which can result in these households being charged at a higher unit cost than households with monthly billing systems. Also, the economic crisis that affected European Union, affected Cyprus with a big decrease in salaries and a big increase in unemployment. The prices of energy in Cyprus, for example electricity and diesel prices, are considered by citizens to be high in relation to their salaries. According to Eurostat the electricity prices in Cyprus are average in comparison with other countries, but high price increases were observed in Cyprus between 2016 and 2018[9].

In Cyprus the following categories are used to define vulnerable consumers:

- Large families, which is defined as a family that receives Child Benefit from the Welfare Benefits Administration Service of the Ministry of Labour, Welfare and Social Insurance for three or more dependent children and with an annual combined family income of up to €51,258. The annual combined family income criterion is increased by €5,126 for every additional child over the number of four.
- Public Assistance recipients from the Social Welfare Services of the Ministry of Labour, Welfare and Social Insurance.
- Beneficiaries of Guaranteed Minimum Income provided by the Welfare Benefits Administration Service of the Ministry of Labour, Welfare and Social Insurance[10.]
- Beneficiaries of Severe Motor Disability Allowance from the Department for Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance.
- Beneficiaries of Care Allowance for Quadriplegic Persons from the Department for Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance.
- Beneficiaries of Care Allowance for Paraplegic Persons from the Department for Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance.
- Haemodialysis patients who are beneficiaries of the Mobility Allowance from the Department for Social Inclusion of Persons with Disabilities of the Ministry of Labour, Welfare and Social Insurance.
- People suffering from multiple sclerosis (MS) who are registered members of Cyprus Multiple Sclerosis Association.
- People living in private rented properties.
- Lone parents with children.
- Unemployed

[9] https://ec.europa.eu/eurostat/statistics-explained/index.php/Electricity_price_statistics

[10] According the results of Ministry of Labour, 23.788 vulnerable costumers received the guaranteed minimum income. This number include: a) 8.249 adults or minors with disabilities b)2,942 low income pensioners and c) 7,376 people aged 55-65 years.

The total number of people who fall within the current definition of energy poverty in Cyprus is 27,000, representing approximately 3.1% of the total population.

These beneficiaries are eligible to apply and benefit from all the existing measures such as:
(a) reduced prices on electricity tariffs (special electricity tariff 08) which is based on a Ministerial Decision
(b) financial incentives (depending on the available budget) for installing a net-metering Photovoltaic system
(c) financial incentives (depending on the available budget) for upgrading the energy efficiency of their houses
(d) safeguarding the continuous supply of electricity, during critical periods, to those vulnerable consumers that uninterrupted power supply is essential for reasons related to their health.

It is noted that the number of vulnerable consumers who fall within the definition of energy poverty and have applied and benefited so far (September 2018) from the above measures is 12,888, representing 1.5% of the total population[11] and just under half of those formally defined as 'energy poor'.

There is no specific information on gender issues related with energy poverty in Cyprus, but from analysis of the information of the Statistical Service of the Republic of Cyprus, for the year 2017, it is possible to observe the following results:

- Risk-of-poverty or social exclusion rate: At risk of poverty or social exclusion (AROPE) rate is the percentage of the population who are: at risk of poverty or severely materially deprived or living in a household with a very low work intensity. Persons are only counted once even if they are present in several sub-indicators. Women: 26.4% and Men: 24%
- Persistent risk-of-poverty rate: The persistent at-risk-of-poverty rate is the percentage of the population living in households where the equivalised disposable income was below the risk-of-poverty threshold for the current year and at least two out of the preceding three years. Women: 8% and Men: 5.2%
- Risk of poverty rate before social transfers by age and gender. Women: 39.5% and Men: 35.3%
- Risk of poverty rate by household type. Women: 27.5% and Men: 19.1%[12]

These numbers demonstrate that women in Cyprus are more vulnerable to the risk of poverty and social exclusion.

11 http://www.moa.gov.cy/moa/environment/environmentnew.nsf/all/8D6EF81F38772607C225829400343871/$file/NECP_190123_1320_clean.pdf?openelement

12 https://www.mof.gov.cy/mof/cystat/statistics.nsf/populationcondition_25main_en/populationcondition_25main_en?OpenForm&sub=5&sel=2

When asked about the main causes for energy poverty in Cyprus, CCA presented the following evaluation:

	Level of importance
Lack of knowledge and information on energy efficiency	Most Important
Energy inefficient building construction	Very Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Very Important
High energy prices	Very Important
Climate conditions	Very Important
Energy inefficient heating systems	Important
Low income	Important
Location (urban, rural)	Less Important

Fig.2 Assessment of main causes for energy poverty in Cyprus
Grade of importance: Not important < Less important < Important < Very important < Most important

III – MEASURES

Below are a series of measures or projects that are used in Cyprus to help tackle energy poverty:

- In 2013, the Cypriot government announced and implemented support schemes promoting electricity generation using RES. One of the schemes provides state grants to vulnerable households for installing 2.000 photovoltaic systems of 3kW each and their connection to the grid via net metering. Households' electricity bills were calculated by deducting the electricity generated by their photovoltaic systems from their overall electricity consumption. Thus, each participating household saved 80% of its electricity bill. Another scheme of installing additional 3.000 photovoltaic systems of 3kW each (but without a grant) was also implemented in 2013.

- Another campaign related to households achieving energy savings was promoted and subsidized by the Cypriot government and included the free distribution of 1,5 million CFL lamps with the payment of the utility bill.

- According to the Ministerial Decree (Act 289/2015), vulnerable households are eligible to receive a reduced electricity tariff. This special tariff is financed through a general electricity levy on electricity prices. In addition, vulnerable households also receive protection from disconnection in certain critical periods.

- Furthermore, there are multiple programmes that provide financial assistance to households to improve the energy efficiency of their dwellings. In some cases, these programmes include

additional provisions to facilitate the participation of vulnerable households. In the Saving Energy – Upgrading of Households programme, vulnerable households can receive 25% more funding than regular households for deep renovation of their dwellings (75% investment coverage compared to 50%). Moreover, implementation of individual energy saving measures for vulnerable households are also funded by the scheme

- The programme "*Energy production from renewable sources for self-consumption*" enables vulnerable households to receive an extra financial aid to install a photovoltaic system of €900/kW, with a maximum of €3.600
- Financial assistance for the installation or replacement of solar water heating systems
- Financial assistance to households to renovate their homes
- Imposing a reduced VAT rate (5%) on the renovation and repair of private dwellings
- CyprusGas2EU Project 2008 - promoted by Ministry of Energy, Commerce and Industry (MECI) aims at introducing Natural Gas via LNG imports to the island of Cyprus in order to end the current energy isolation of Cyprus, by establishing the required infrastructure.

Czech Republic

STEP Partner: dTEST (Czech Association of Consumers TEST)

I - ENERGY POVERTY DEFINITION

There isn't a legal definition for energy poverty in Czech Republic. However, national authorities and other stakeholders conceptually define energy poverty as an inability to afford adequate level of heating, cooking, lighting and use of appliances in the household. One of the recognised definitions is: the household is considered to be energy poor if the household spends more than 10% of its income on energy and at the same time if the household has an income less than 1,5 times of subsistence level (minimum salary which is settled by law) after paying for all housing costs. DTEST agrees with these definitions which are commonly used in Czech Republic.

When asked if the EU should adopt a common European definition for energy poverty, DTEST responded positively, arguing that it would improve the position of consumers who are in energy poverty or vulnerable and it would consequently lead to pressure on EU countries to create measures to tackle it.

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

Regarding the diagnosis of energy poverty in Czech Republic, DTEST mentions that there are not any specific statistics relating to energy poverty in the country. There is only data for general poverty, for example statistics about households who have received a housing supplement or living allowance from the Government.

In 2016 a study[13] regarding energy poverty was conducted by the Ministry of Industry and Trade. In this study an estimate on the numbers of energy vulnerable consumers is presented: 16% of households in Czech Republic are considered energy poor. The calculation is based on household income, type of building, size of flat/house, number of family members and cost of energy.

When it comes to the causes of energy poverty in Czech Republic, DTEST lists the following: low family income, debts, high cost of living, high price of energy (including unfair contracts, fees etc.), low

[13] "Measures against Energy poverty", page 24 – 28: https://www.mpo-efekt.cz/upload/7799f3fd595eeee1fa66875530f33e8a/energeticka-chudoba-v12.pdf

energy efficiency, health issues, long periods of time spent at home (seniors and unemployed people, parents who are looking after their children).

Regarding the groups of people with more vulnerability towards energy poverty, DTEST considers that households with low income, seniors, especially those living in houses without good insulation (low income, more time spending at home), young families (birth of child causes more expenses and also consumption of energy is higher) and single parents with child/children should be considered.

A survey carried out by the STEM agency[14] between January and February 2019 and using a representative sample of 1.084 adult consumers, presents the following results: 22% of households save on other expenditures in order to have enough money for heating. 39% of households don't use the necessary energy in order to achieve adequate heating level. Moreover, the survey demonstrated one important fact: consumers in Czech Republic prefer a higher temperature compared to the rest of the EU countries – where adequate level of heating is 22 degrees.

According to the research there isn't any specific data regarding gender issues and its relation with energy poverty, but DTEST mentions that the numbers on general poverty show that women suffer more from general poverty then the male gender (for instances: there are more women who are single parents, and among seniors there are more single women).

When asked about the main causes for energy poverty in the Czech Republic, DTEST presented the following evaluation:

	Level of importance
Low income	Most Important
Lack of knowledge and information on energy efficiency	Very Important
High energy prices	Very Important
Energy inefficient building construction	Important
Energy inefficient heating systems	Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Important
Location (urban, rural)	Important
Climate conditions	Less Important

Fig. 3. Assessment of main causes for energy poverty in Czech Republic
Grade of importance: Not important < Less important < Important < Very important < Most important

[14] January/February 2019: https://www.stem.cz/naklady-na-vytapeni-ceskych-domacnosti-a-energeticka-chudoba-v-cr/#post-5733-footnote-1

III – MEASURES

Below are a series of measures against energy poverty which were mentioned by DTEST at national level:

- Integrated Regional Operational Programme (governmental) – financial support for projects in all regions (except Prague), also includes renovation for more energy efficient buildings – i.e. apartment buildings: https://irop.mmr.cz/cs/Projekty

- New Green Savings (governmental) – financial support to improve energy efficiency in houses and flats for permanent living (building insulation, heating systems, renewable energy systems): https://www.novazelenausporam.cz/

- EFEKT (governmental) – support for education work on energy efficiency and energy savings and also financial support for energy saving measures (for example energy efficiency bulbs in municipalities): https://www.mpo-efekt.cz/cz/programmey-podpory/54039

- Environment Operational Programme (governmental) – Part of this programme provides with financial support for the replacement of individual old boilers: https://www.opzp.cz/o-programmeu/kotlikove-dotace/

- Housing Supplement (governmental) – monthly financial support for low-income households – the grant varies according to the family income, the number of members of the household, population in the area and cost of living.

- Living Allowance (governmental) – monthly financial support for low – income people.

- Programme Panel 2013+ (governmental) – long term loan for renovation of apartment housing.

- Special energy tariffs - there isn't any kind of social energy tariffs from the state. However, some suppliers in the market offer tariffs with discounts for seniors and/or consumers with disabilities.

Latvia

STEP Partner: LPIAA (Latvijas Patērētāju interešu aizstāvības asociācija)

I - ENERGY POVERTY DEFINITION

There isn't a legal definition of energy poverty in Latvia. However, there are definitions applicable to categories of vulnerable consumers, such as the *state social insurance* and the *state social benefit* schemes, which refer to:

- People receiving the guaranteed minimum income (GMI) level
- Vulnerable families according to the income level
- Low-income people according to income levels which are different across municipalities, ranging between €128 till €360

There is also the definition used for the *municipal social assistance* scheme: material support to vulnerable and low-income families (persons) to satisfy their basic needs and to promote their integration in the labour market.

LPIAA mentions that many political debates and working groups were implemented to discuss energy poverty in the country, but no real results were achieved with respect to adopting a legal definition. For LPIAA, the adoption of an EU definition for energy poverty is essential since it will enable the comparison of EU data, which is useful for national debates, and provide a benchmark tool.

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

Regarding the methodology for diagnosis, even though there isn't a legal definition, the country has implemented the criteria for granting social benefits (the above mentioned: the State Social Insurance, the State Social Benefits and additionally the Municipal Social Assistance). LPIAA also notes that in the case of municipal social assistance, the support is different in Riga and other parts of Latvia. These regional disparities cause significant economic differences that persist between Riga and Latvia's other regions.

Regarding the causes for energy poverty in the country, LPIAA considers that income inequality in Latvia is high, as the redistribution through the tax-benefit system is low. The adequacy of social benefits remains low and the impact of social transfers on poverty and inequality reduction is limited. The poverty risk among the elderly and people with disabilities is relatively high and increasing due to benefits not keeping pace with wage growth. The at-risk-of-poverty or social exclusion rate for the elderly was 49% in 2018 (European Union average: 18.2% in 2017) and for people with disabilities

40.7% in 2017 (European Union average: 29.3% in 2017). The State social security benefits for people with disabilities and minimum old-age pensions, have not been revised since 2006. The minimum income level reform, announced in 2014, has not been implemented, which negatively affects the poorest households.

The groups that are most vulnerable to energy poverty in Latvia, according to the partner's research are:

- People with low or no income
- Retired people with minimum pension
- Families with more than 2 children
- One retired people in household
- Long term unemployed

Based on the Energy Poverty Observatory data (situation on September, 2019) about 12% of population has been unable to pay utility bills on time for the main dwelling due to financial difficulties while Central Statistical Bureau data show the positive grow of average wages and pensions. The situation becomes more stable.

The local "CV-Online Latvia" research shows that the gender pay gap is rather large - last year men earned an average of 20% more than women. While the difference remains significant, it is narrowing. The income gap between women and men is smaller in executive positions and management. So we can estimate that women are at greater risk of energy poverty[15].

When asked about the main causes for energy poverty in Latvia, LPIAA presented the following evaluation:

	Level of importance
Energy inefficient building construction	Most Important
Energy inefficient heating systems	Most Important
High energy prices	Most Important
Location (urban, rural)	Most Important
Climate conditions	Most Important
Low income	Most Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Important
Lack of knowledge and information on energy efficiency	Important

Fig.4 Assessment of main causes for energy poverty in Latvia

Grade of importance: Not important < Less important < Important < Very important < Most important

[15] https://www.cv.lv/pages/algas2019/realplain?keel=lati&utm_source=cv.lv&utm_medium=teksta_saite&utm_campaign=Algu_petijums

III – MEASURES

Below are a series of national measures to tackle energy poverty at national level:

- Initiative to support vulnerable social groups - people with disabilities (disability Group I), large families and families caring for children with disabilities. The term "protected user" is set by the law. People in these vulnerable categories receive the service in the form of a discount on the electricity bill, which is compensated for by the mandatory purchasing power component and the fixed part of the distribution system service or connection charge, as well as reduced electricity price for 100 kWh (or 400 kwh consumption for large families: https://www.em.gov.lv/lv/nozares_politika/energijas_tirgus_un_infrastruktura/elektroenergijas_tirgus_atversana/atbalsts_trucigam__maznodrosinatam_un_daudzbernu_gimenem/

- Initiative by the energy distributor - smart electricity meters. Since the smart grid continues to develop, 150.000 smart electricity meters will be installed during 2019. To date, there have been installed in 544.000 sites across Latvia and account for 83% of customers' total electricity consumption. It is much easier for senior consumers to deal with the meter readings. More information: https://www.sadalestikls.lv/as-sadales-tikls-prioritates-2019-gada-digitalie-risinajumi-un-pakalpojumi-klientiem/

- Initiative by the energy distributor - the power load calculator. Single-phase connections to the electrical network are mostly found in apartments. This connection power is sufficient to meet all daily needs, such as turning on the lights and using the washing machine, fridge, TV, iron, electric kettle and other appliances. By contrast, a three-phase connection is more common in new housing developments and private homes, as their inhabitants use electrical appliances which require greater electrical network power, such as heat pumps, water pumps or air conditioners. Consumer need to evaluate if he or she can afford three-phase connection and use the power load calculator. More information: https://www.sadalestikls.lv/en/to-customers/rates/power-load-calculator/

Lithuania

STEP Partner: ALCO (Alliance of Lithuanian Consumer Organizations)

I - ENERGY POVERTY DEFINITION

In Lithuania there isn't a legal definition for energy poverty, but according to ALCO, the following meanings are used by the national authorities participating in the current definition setting debate:

- Energy poverty is the situation where individuals are not able to adequately heat (or provide necessary energy services) in their homes at affordable cost (Pye et al., 2015)
- Energy poverty occurs where a household finds it difficult or impossible to ensure adequate heating in the dwelling at an affordable price and having access to other energy-related services, such as lighting, transport or electricity for use of the Internet or other devices at a reasonable price (European Economic and Social Committee, 2011/C 44/09)

When asked if ALCO agrees with the mentioned definitions, the partner responded negatively on the basis that the difficulty or inability to pay bills or get enough heat is not clear. For example, the definition should include what percentage of the family's expenditure is used for heating. ALCO is concerned that there are welfare households who spend a large amount of their income, both in absolute and proportionate terms, on energy. It means that a definition based on the percentage of the income/expenditure spent on energy should include a 'cap', since high-income households with high percentage of spend on energy should not be considered 'energy poor' in the classic sense.

Figures show energy poverty can also be experienced by residents who have no problem paying their heating bills and their income is not below the poverty line. On the other hand, people living below the poverty line are not always subject to energy poverty.

In Lithuania, discussions are currently under way to establish a definition for energy poverty at a Government level, with a working group (ALCO is part of it), chaired by Govt. Chancellor, in place. There is no clear definition yet, as there is no consensus on which sector should take responsibility to tackle energy poverty: social security, energy or environmental.

ALCO considers that it is important to have a common EU definition for energy poverty. For example, it could be an EU-wide definition of a maximum percentage of income that a household spends on heating and basic electricity needs, but certain level of minimum thermal comfort should be ensured as well as basic needs (cooking, lightning etc.). ALCO advocates this position on the basis that the European Union is moving towards a communion of income and expenditure, so the definition of

certain phenomena should be uniform, subject to certain exceptions, depending on the specifics of Member States.

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

In Lithuania there is a methodology to measure energy poverty. The indicators are similar to the ones provided by the Energy Poverty Observatory:

1. Household indebtedness for utility bills

The indicator shows the proportion of the population who, due to lack of funds, are in arrears with their utility bills.The Lithuanian Department of Statistics (LSD) annually collects data on households that, due to lack of funds, have debts to pay utility bills, credit payments, and so on.

2. Inability to adequately heat housing due to lack of funds

The indicator shows the proportion of the population living in households who, due to lack of funds, could not afford to heat their homes sufficiently when it was cold. LSD calculates and publishes the indicator annually.

3. A large part of household revenue is spent on energy costs

The indicator shows the share of households whose energy expenditure (electricity, gas, other fuels, thermal energy) relative to disposable income is more than twice the median.

4. Hidden energy poverty

The indicator shows the share of households whose absolute energy expenditure is below half the national median.

Indicators 3 and 4 could be calculated on the basis of Household Budget Survey data[16].

The aforementioned working group agreed to use these two indicators, including those indicators in the National Progress Programme of Lithuania:

- Share of households who spend a 'high' proportion of their income on energy.
- Proportion of household income dedicated to energy.

Currently there is no consensus on what values should be considered achievable targets. In the case of the former indicator, discussion is underway on a proposal setting a 2030 target that is half of the figure for 2016.

ALCO considers that there are three causes for energy poverty in Lithuania: low energy efficiency, high energy prices (energy costs) and low income. And a fourth aspect should be not overlooked: distributional impacts of the energy transition, which consist of the differing cost and benefits across specific population groups.

[16] Important note: Ministry of Social Affairs and Labour is doubting the Household Budget Survey will be financed if the indicator is proven no longer relevant in the current debate on energy poverty legal definition. Ministry officials said that in case the indicator is discontinued to be observed, the Household Budget Surveys may be discontinued altogether (because the surveys are very costly). Ministry of Energy speaks differently: they are not so sure about discontinuation of such surveys; this factor is of less relevance of them.

The categories of consumers that are more vulnerable to energy poverty in Lithuania, according to the research are:

- Urban areas more than rural areas
- Household with unemployed persons
- Household with pensioners
- Household with children
- Household with the disabled persons
- All households - as everyone could potentially be at the risk

Regarding the numbers of energy poor consumers 28.9 % is the proportion of persons living in households who, because of lack of income, cannot afford sufficient heating. The 'lack of income' aspect means less the actual low income / low wealth situation, but the desire of a typical household to save money on energy (even at the expense of thermal comfort), but retain more funds for other everyday basic needs (food, clothing, mobility, medicines). People are more likely to accept thermal discomfort and have other crucial needs met (like medicine), than the contrary.

According to the research, there isn't any data available considering gender issues regarding energy poverty.

As for the main causes for energy poverty in Lithuania, ALCO responded with the following evaluation. ALCO added all the indicators are at some extent relevant, but their inclusion depends on the purpose to which they are being used. Only some of them should be directly used for energy poverty measuring.

	Level of importance
High energy prices	Most Important
Location (urban, rural)	Most Important
Low income	Most Important
Energy inefficient building construction	Very Important
Energy inefficient heating systems	Very Important
Climate conditions	Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Important
Lack of knowledge and information on energy efficiency	Important

Fig.5 Assessment of main causes for energy poverty in Lithuania

Grade of importance: Not important < Less important < Important < Very important < Most important

III – MEASURES

The following text and the table are provided in the draft (as of June 2019[17]) of the Integrated national energy and climate plan of the republic of Lithuania:

"In Lithuania, specific research and policies on energy poverty have yet to be developed. Until summer 2018, Lithuania has only been analysed in the context of regional studies of Eastern Europe. An important instrument to address energy poverty in Lithuania is heating compensation, which provides financial assistance to households who cannot afford sufficient heating. In addition, some general energy policies could be potentially beneficial for energy poor households. Some government-sponsored programmes target energy efficiency improvements in apartment buildings. More than 400 apartment buildings have been renovated since 2013. Another programme aims to replace inefficient biomass boilers with more energy efficient alternatives, with funding available for at least 9000 households. Another interesting measure in Lithuania requires energy suppliers to establish an agreement with the national government, whereby the suppliers commit to educating and advising households on energy efficiency measures. The European project Students Achieving Valuable Energy Savings 2 (SAVES2) is also active in Lithuania. It aims to catalyse sustainable energy behaviours among university students to help them reduce their exposure to energy poverty."

Selected measures	Type of measure	Organisation	Target groups
Programs for renovation of apartment building	Building insulation, heating system	National government	Apartment buildings
Heating compensation	Energy bill support	National government, local government	Low-income household
Program to replace boilers	Heating system	National governement	No specific target group
Agreements on energy education and consultation for energy consumers	Information and awareness	National government, energy suppliers	No specific target group

Table 1. Energy poverty measures in Lithuania

As a conclusion, ALCO considers that the lack of measures and policies to tackle energy poverty in Lithuania is due to the fact that solving this problem was not the first priority of the Government in the last decade.

[17] No new version of the Plan is made publicly available as of end of September 2019.

Poland

STEP Partner: FK (Federacja Konsumentów)

I - ENERGY POVERTY DEFINITION

There isn't a legal definition of energy poverty in Poland. However, there is a mechanism of financial intervention for the most vulnerable consumers. A consumer that is declared as vulnerable by the social welfare system and is entitled to housing allowance, can also apply for an energy supplement.

FK considers this method of financial intervention for those who are most vulnerable is not adequate. Support mechanisms might not necessarily be targeted at paying for the household's energy bill, it might be identified and distributed through a country's social welfare system.

On the one hand, the energy supplement is financially very low, and on the other nobody is actively supporting families towards energy savings. There is also no programme to advise how to be a smart energy consumer. Vulnerable consumers are also a group that do not understand bills, do not know what they are paying for, and therefore pay more. Consequently, they are particularly exposed to unreliable market practices.

In poverty research, it is usually emphasized that it is a multidimensional phenomenon that is not just about income. Therefore, the second component of the measure - the severely materially deprived people indicator - reflects the need to adopt a measure that better reflects the multidimensional nature of poverty.

A working group in the Ministry of Energy was set up in 2017 in order to debate energy poverty and discuss the adoption of a definition[18].

FK considers it important to have a common definition at the EU level for energy poverty, and the justification provided is that a common definition gives a possibility for common discussion for all EU members. Moreover, such definition should include indicators which reflect material deprivation factors.

[18] https://www.gov.pl/web/energia/o-ministerstwie-zespoly-rady-komisje-komitety-zespol-do-spraw-ograniczenia-ubostwa-energetycznego-w-polsce

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

Regarding the currently available methodology to diagnose energy poor consumers in Poland, FK refers to the current approach in which those with the lowest income receive a housing allowance. Therefore, such persons may also apply for an energy allowance (in accordance with the Energy Law) as described above.

Regarding the causes for energy poverty, FK refers to the latest available research which shows that energy poverty affects 9.6% of the Polish households, or over 4 million people. The most threatened are lonely people living in large houses in the countryside, tenants of old, municipal tenement houses in cities, large families living in large rural houses, and poor inhabitants of free-standing houses in villages and small towns (Institute for Structural Research, 2016).

Under the project ASSIST2gether (programme Horizon 2020, grant agreement No.754051) FK conducted research on energy poverty in Poland. Thanks to the involvement of the Office of Assistance and Social Projects and the Department of Social Assistance of the City Hall of Warsaw, we were able to conduct surveys directly among people at risk of energy poverty using qualified social workers as interviewers. Since this research gives an important overview of energy poverty in Poland, some of its results are presented below:

- 38.6% of respondents owned their homes. This is a very low indicator for Poland, because statistics show that 83.5% of Poles own flats or houses on their own (Eurostat data). If the data obtained from the answer to this question is combined with data on the monthly income of respondents, it is not surprising that the next group of respondents are residents of social premises (27%). Tenants are 10.2% of the surveyed and almost equal in size (9.8%) are residents in private properties. It should be noted that there were 36.8% of respondents in the social housing premises. The conditions related to the occupation of this type of real estate / flats are specific. The tenant has to meet different criteria - they are generally awarded to people in a difficult financial or life situation.
- 51.6% of respondents occupied a flat on one floor of a building – generally inside a building. This can affect, for example, the temperature in an apartment or its "heating" needs. 15.3% of respondents live in the premises on the ground floor, and 9.3% live in a flat on the top floor. A large percentage of respondents (20%) live in a detached home or semi-detached house.
- In most cases, respondents live in old or fairly old properties. As many as 19.5% of respondents live in estates built before 1945. A further 28.4% of respondents live in post-war housing (built between 1946 and 1960).
- Residential estates built from the late 1950s to the nineties were built from a prefabricated large slab, characterized by low thermal insulation. 62.4% of respondents answered that the estate they live in was built between 1946 and 1980, and so at a time when other construction norms were in place, for example very low thermal efficiency requirements.
- 59.5% of people said that the property they live in has been renovated. 20% of respondents have no knowledge on this subject. 19.5% say that the property was not renovated.
- Almost two thirds of respondents try to use electricity and heating to save on bills (64.7%). But also, a relatively large percentage of respondents (35.3%) do not.

- 139 people out of 215 respondents declared they use energy efficiently to save on bills, and as many as 178 people declared that they turn off lighting in rooms not in use. This is the most frequently indicated behaviour aimed at saving energy, which is the most obvious and uncomplicated, intuitive behaviour.

The problem faced by vulnerable citizens in Poland is, on the one hand, housing without adequate thermal insulation, and secondly the need to heat individual rooms.

Regarding the categories of consumers more affected by energy poverty, FK indicates that the distribution of energy poverty among Poles depends mainly on household characteristics and on the features of inhabited buildings. While looking at the first factor, the energy poverty problem affects mainly households who derive their means of subsistence from non-earned income sources, one-person households (usually elderly people), households in rural areas, single parent households and households of pensioners and retirees.

Available data on energy poverty indicate that in 2016, 12.2% of people in Poland lived in energy poverty, which in absolute terms meant 4.6 million people in 1,3 million households (source: Institute for Structural Research).

There is no official data available in Poland regarding gender issues and its relation with energy poverty. However, in percentage terms, the phenomenon of energy poverty concerned women and men to almost the same extent (source: Dominik Owczarek Institute of Public Affairs, 2016).

As for the main causes for energy poverty in Poland, FK responded with the following evaluation:

	Level of importance
Energy inefficient building construction	Most Important
Energy inefficient heating systems	Most Important
Low income	Very Important
Lack of knowledge and information on energy efficiency	Very Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Important
Climate conditions	Less Important
High energy prices	Less Important
Location (urban, rural)	Less Important
Other: Too big house for habitant income	Important

Fig.6 Assessment of main causes for energy poverty in Poland
Grade of importance: Not important < Less important < Important < Very important < Most important

III - MEASURES

Below is a list of measures directed at tackling energy poverty in Poland:

- Energy *Supplement (Dodatek Energetyczny*) - scope of measures: supports the payment of energy bills, not necessarily a preventive measure. Stability of the financial measure: plan to last till at least 2023 with planned budget rising each year. The value is set yearly and depends on the number 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).

- *Housing Supplement (Dodatek Mieszkaniowy)* - scope of measures: supports the payment of housing bills, not necessarily a preventive measure. Dedicated to vulnerable consumers that could be best defined as economically disadvantaged, rather than in energy poverty. Availability of funding: support for 6 months counted from the first day of the month after the submission of the application for funding. The amount of grant is the difference between the expenditure for a 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 in the household.

- *Lokalny Programme Osłonowy (Local Shelter Programme)* - Set to support the limitation of emissions for relatively poor households. Stability of the financial measure: it will last till 2022. Finance of the measure – counted as a difference in spending between current monthly expenditure and previous expenditure: 931 zł/per household on average was granted in 2016.

- *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. Stability of the financial measure: continuously collected applications till January 2019. 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.

- *Ryczałt energetyczny* - Scope of measures: subsidy for combatants and specified related groups, supporting the payment of the energy. Stability of the financial measure: it started in 08/2014. Finance of the measure: up to 50% of electricity, gas and heating costs.

- *Premia termomodernizacyjna (Thermo-modernisation bonus)* - Scope of measures: thermo-modernisation bonus is a public support scheme which aims to increase building energy efficiency. It is awarded by the Bank Gospodarstwa Krajowego (BGK) bank as a part of the Thermo-modernisation and renovation fund (FTiR). Stability of the financial measure: stable long-lasting measure, no ending date specified, unlikely to change. Finance of the measure: case specific, partial refund for the costs of loans for thermo-modernisation.

- *PONE - pożyczki dla osób fizycznych* - Scope of measures: specific programmes 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 – thermo-

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). 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.

- The "Clean Air" programme is a government project aimed at improving energy efficiency and reducing emissions of dust and other pollutants into the atmosphere. Includes existing and newly built single-family residential buildings. It will be implemented in 2018-2029. There will be changes in the "Clean Air" programme. The European Commission has reservations about the programme. It involves distributing funds through a network of sixteen 'voivodship' (Polish provinces) environmental protection funds. This mechanism hinders access from all households in need of support.

Portugal

STEP Partner: DECO (Portuguese Association for Consumer Protection)

I - ENERGY POVERTY DEFINITION

In Portugal there isn't a legally adopted definition for energy poverty. The topic has only recently been introduced in national discussions. Despite this fact, there is a concept for economical vulnerable consumers which was legally established in 2010 in the Decree of Law n. º 38-A/2010[19], from the 28th December 2010. This definition is only used for granting the social energy tariff for electricity and natural gas supply. The term 'energy poverty' is not mentioned in the text of the decree.

The definition states that the economical vulnerable consumers are the natural persons who are in a situation of economic deprivation and who, having the right to access the essential electricity supply service, should be protected, particularly with respect to prices.

Again, according to the law, an economical vulnerable consumer is diagnosed using the same criteria already established for the social benefits, such as:
a) Beneficiaries of the solidarity supplement for the elderly
b) Beneficiaries of social inclusion income
c) Beneficiaries of social unemployment benefit
d) Beneficiaries of family allowance
e) Beneficiaries of social invalidity pension
f) Beneficiaries of the old-age social pension

Regarding electricity supply, there is an additional criterion for households that have an annual income lower than the maximum annual income (defined by the Government), even if they do not receive any social benefits.

With respect to DECO's opinion of the above-mentioned definition of energy poverty, DECO considers it is not an appropriate definition, since it only takes into account economical vulnerabilities. It also only provides for price discounts which DECO considers is not the main solution to energy poverty. DECO considers the social energy tariff a positive measure since it helps consumers pay their energy bills and the structure of the measure itself as adequate. However, the

[19] https://dre.pt/web/guest/legislacao-consolidada/-/lc/58846107/201704121719/exportPdf/normal/1/cacheLevelPage?_LegislacaoConsolidada_WAR_drefrontofficeportlet_rp=indice

criteria to access it is not the same for natural gas and electricity, and it is not applicable for other energy sources such as piped LPG and bottled gas.

Regarding why Portugal doesn't have a definition for energy poverty, DECO believes this is because the topic is quite recent in national discussions, since previous discussions focused on economical vulnerability only. The measures adopted in the country, such as the social tariff and grants for housing renovations, were not created as a policy to tackle energy poverty. DECO considers that a national discussion on the topic is necessary and all existing policies and support mechanisms must be reviewed in order to create a pack of measures to tackle energy poverty.

DECO definitely thinks there should be a common European definition of energy poverty, since this would allow the comparison of data, measurement of adopted policies and identification and dissemination of best practice. Additionally, the adoption of an EU definition would consequently result in the approval of common measures and targets for the reduction of energy poverty.

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

In Portugal there isn't a methodology to identify energy poverty. The only alternative is the above-mentioned definition of the social energy tariff. This measure provides economical support to households through including a social tariff in the energy bill. Since 2016, this tariff is automatically granted to households receiving certain social benefits (in the case of natural gas and electricity) and to low income households (electricity supply only). There are also limits on eligibility. In the case of electricity, the limit applies to contracted electricity capacity and for natural gas the limit relates to the level of consumption.

The numbers from 2018 indicate a total of 812,680 beneficiaries of the electricity social tariff (corresponding to approximately 8% of the population) and 35,543 beneficiaries of the natural gas social tariff.

Regarding the causes of energy poverty in Portugal DECO lists the following as the most influential: energy inefficient buildings, high energy prices and household low income. Besides these factors, the lack of information on energy efficiency behaviours is also an important issue contributing to energy poverty.

There isn't data available on the categories of people most affected by energy poverty in Portugal, but it is possible to estimate that the elderly with lower pensions, particularly the elderly living alone, single parent families, families with younger children and lower incomes are the most vulnerable. Researchers have recently developed an interesting approach and methodology for mapping energy poverty in the country by combining a series of data to create an index of energy poverty that combines the level of thermic discomfort and the capacity to implement measures[20].

[20] Energy poverty vulnerability index: A multidimensional tool to identify hotspots for local action: https://www.sciencedirect.com/science/article/pii/S2352484718303810

The number of energy poor households in in Portugal according to the EU Energy Poverty Observatory[21] are:

- In 2016, 7.3% of the population said they had arrears on utility bills
- In 2010, 8.8% households had an absolute energy expenditure below half the national median
- 15.7% of households, in 2010, had a share of energy expenditure in income more than twice the national median
- In 2016, 22.5% of the population said they weren't able to keep their homes adequately warm.

According to the "*European Energy Poverty Index: Assessing Europe's Energy Inequality*", developed by OpenEx, based on DG Energy ad-hoc data collection[22], Portugal occupies the 4th position, with a very high level of energy poverty, facing both winter and summer energy poverty.

DECO wasn't able to find national data or figures regarding gender breakdown. There is available information[23], regarding the rate of poverty risk. This shows that women are in a slightly higher risk of poverty when compared to men, in 2018 for men the rate was 21% and for women 22.1%.

As for the main causes for energy poverty in Portugal, DECO responded with the following evaluation:

	Level of importance
Energy inefficient building construction	Most Important
Lack of knowledge and information on energy efficiency	Most Important
Low income	Most Important
High energy prices	Most Important
Energy inefficient heating systems	Very Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Important
Climate conditions	Important
Location (urban, rural)	Important

Fig.7 Assessment of main causes for energy poverty in Portugal
Grade of importance: Not important < Less important < Important < Very important < Most important

[21] https://www.energypoverty.eu/
[22] https://www.openexp.eu/european-energy-poverty-index-eepi
[23] https://www.pordata.pt/Europa/Popula%C3%A7%C3%A3o+em+risco+de+pobreza+total+e+por+sexo+(percentagem)-2330

III – MEASURES

Below is a list of measures directed at tackling energy poverty in Portugal:

- Energy Social Tariff[24]: applicable for electricity and natural gas supply. This tariff consists of a discount on the energy bill, which is automatically granted for households who fulfil the criteria. The automated process is possible through cross-checking fiscal and social security information, managed by the Directorate-General for Energy and then communicated to the correspondent supplier.
    - The current discount rate for electricity is 33.8%, and for natural gas 31.2%. Both are calculated on the basis of transitory tariffs in the regulated market, excluding VAT, other taxes and charges.
    - This measure is currently financed by the electricity producers in the ordinary regime, and regarding natural gas, since 2018, by the TSO (Transmission System Operator) and by the suppliers.
    - In 2018, 812,680 households received the electricity social tariff and 35,543 received the natural gas social tariff.

There are other measures linked to energy efficiency that could cover situations of energy poverty:

- *"Casa Eficiente 2020"* (Efficient House 2020) programme: this programme aims to make houses more energy efficient. It received funding of 200 million euros for the period 2018-2021, co-financed by the European Investment Bank (EIB). Estimates suggest that 12,000 homes will benefit with the average cost of the works between €12,500 and €13,000. The programme includes a facility to simulate on the websitehttps://casaeficiente2020.pt/ how much it will cost to carry out the renovation works considered necessary to make the home more efficient. Afterwards, consumers will receive an "Efficient House 2020" declaration that will allow them to request a loan from a list of participating banks. The programme intends to offer more favourable conditions than traditional consumer credit. Despite this, the programme was recently criticized for offering loan conditions that aren't particularly favourable when compared to other types of loans The Government recently announced that changes are in progress to address this issue[25].

- "*Fundo de Eficiência Energética*" (Energy Efficiency Fund (FEE)): promotes energy efficiency in existing buildings and was created by the Decree of Law n. º 26/2011. Between 2017 and 2018, the FEE launched one call for funding for projects targeting energy efficiency improvements in buildings. In the most recent call for funding, launched in 2017, a total of € 1,550,000 was available for households owning a single house or owning an apartment in a multi-family house and the same amount for legal persons owning a building for services purposes[26]. This covered, for example, the installation of energy efficient windows and solar thermal systems. The costs covered included:
    - the supply and installation of the equipment

[24] http://www.erse.pt/pt/electricidade/tarifaseprecos/2018/Paginas/TarifasSociaisAcessoTVF2018.aspx
[25] https://www.dinheirovivo.pt/empresas/governo-flexibiliza-regras-para-dinamizar-programmea-casa-eficiente/
[26] http://www.pnaee.pt/avisos-fee/aviso-25

- the technical survey prior to installation
- the issue and registration of a Building Energy Certificate.

The Energy Efficiency Fund is partially supported by Portugal 2020, which is a programme financed by the EU. Applications to the fund involved a very bureaucratic and complex process, which isn't considered consumer-friendly, especially for the most vulnerable consumers.

- *IFRRU 2020*[27] is a financial instrument which aims to support investments in urban renewal throughout Portugal. The types of interventions that may be financed include: overall rehabilitation of buildings aged 30 years or more (or in the case of younger buildings, with a conservation level of 2 or less); rehabilitation of abandoned industrial spaces or units; and rehabilitation of private units integrated in an overall rehabilitation of a social housing building. In the same funding application, IFRRU 2020 supports energy efficiency measures complementary to urban rehabilitation interventions. Support is provided through financial products of two types (not cumulative): Loans - provided by the financial entities selected to manage IFRRU 2020 support, with maturities of up to 20 years, grace periods equal to the investment period + 6 months (max. 4 years), and interest rates below market rates and guarantees - associated with loans provided by the same selected financial entities, for projects that do not have sufficient guarantee.

- *PPEC - Promotion Plan for Efficient Electricity Consumption*[28]: is a competitive mechanism promoted by the Portuguese Energy Services Regulatory Authority (ERSE), under which several entities, among them consumer organizations, may submit proposals. PPEC aims to promote more efficient behaviour of electricity consumption and the adoption of more efficient equipment by electricity consumers. The funding for PPEC comes from the electricity tariffs, and according to the NRA, between 2007 and 2012, several editions of PPEC were developed with an overall budget of 60 M€. The estimated benefits are calculated to be 539 M€[29]. The measures covered are divided into tangible (example: installation of equipment with a level of efficiency superior to the standard equipment on the market) and intangible (example: Promote the change on consumers' behaviour).

[27] https://ifrru.ihru.pt/documents/20126/35997/Brochure_IFRRU2020_May2017.pdf/b6ac3dcb-14d9-a19a-6785-e2694c85dc36?t=1556286207728
[28] http://www.erse.pt/eng/engefficiency/Paginas/default.aspx
[29] Source: http://www.erse.pt/eng/engefficiency/Documents/PPEC_experience.pdf slide 48

Slovakia

STEP Partner: SOS (Spoločnosť ochrany spotrebiteľov)

I - ENERGY POVERTY DEFINITION

In Slovakia there is a legal definition for energy poverty, which is considered as the situation, when average monthly costs of household paid for energy, gas, heating and hot water represents a significant part of average monthly income of the household. Although Slovakia has legislation for energy poverty, a more precise and concrete definition is lacking. That is why the regulator suggests the following one in its national Conception for protection of consumers falling under conditions of energy poverty:

Under the energy poverty term, we understand the situation, when individuals or households don´t have enough financial resources to be able to heat and buy other energy needed for the household. According to the Slovak approach this happens if 10% of the household income is allocated to energy expenditures, and simultaneously if the household is granted with a special social financial benefit named "*support for people in material need*".

In Slovakia there is also a definition for the vulnerable energy subscriber. For the regulation period 2017 - 2021 the category of vulnerable energy subscribers combines consumers in households and small enterprises with annual electricity consumption up to 30 000 kWh.

SOS believes that the current definition used in Slovakia is not adequate. 10% of the household income means every fifth Slovak is fighting energy poverty and adding the second condition, where there has to be benefit for material need received, makes the definition more appropriate. However, this definition does not cover all specific vulnerable groups of population in risk of energy poverty in Slovakia. This includes seniors, single parents, rural consumers, unemployed and people living on other social benefits than material need. According to the research, the first three groups mentioned above don't always receive those specific state benefits for material need, so these groups aren't covered by the energy poverty concept described previously.

The partner explained that it took a lot of time to come up with a concrete definition. The Slovak regulator argues that it is a cross sectorial problem. It is a result of many factors which are not primarily connected with the energy producers and providers (the concept for energy vulnerable consumers is rather prepared by the state energy regulator).

Another argument is that Slovakia exceeded its plan to get 170,000 people out of the risk of poverty in general. According to EU SILC 2017, 255,000 people were supported to get out of 'being at risk of poverty or social exclusion' category.

The Slovak regulator believes it is not possible to solve the problem of energy poverty alone, isolated only through the measures accepted on the side of regulation. They call for over-all-society concept with consideration of social aspects, education of consumers and new working opportunities, which will ensure higher income to citizens. Only integrated attitude of all responsible bodies of state administration will allow to deal with this problem effectively.

Regarding the question on the need to have a common EU definition for energy poverty, the partner referred that they would welcome it, as a European tool to make local governments act faster and more focused. It does not seem from the S.O.S' point of view, that the Slovak regulator, ministries and other stakeholders consider energy poverty as a real and actual problem. Especially, when the regulator believes that a strong market regulation is the best option for consumers.

The Slovak regulator has been working on a concept to protect energy vulnerable consumers, by defining the conditions of energy poverty, since 2014. This was first published only this year in 2019.

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

Other legal terms are related to the definition of energy poverty, such as the term 'material need'. 'Material need' refers to the condition, when the income of the citizen does not reach the living minimum. 'Living minimum' is understood as the generally accepted minimal level of income for an individual, under where there is a state of material need already.

Material need is defined as the situation, when household income (Slovak law 417/2013 about material need) does not reach the level of living minimum stated by special provision and members of the household are not able or it is not possible for them to get or increase their income.

Regarding the methodology to assess energy poverty, SOS explains that they are linked with the monthly disposable income of households, household members' property, average monthly expenditures for energy supply at a level sufficient to ensure an adequate home temperature and other household energy consumption.

The minimum energy consumption of households is determined by the type of household, depending on the number of household members and the way in which they use energy (number of members and dependent children, energy mix etc.). This should be updated at least every 10 years due to climate change and the development of the energy efficiency standards of household appliances and heating equipment.

One-member household

Heating	45,83	kWh/month
Water heating	44,51	kWh/month
Other consumption of electricity	56,30	kWh/month
Total	146,64	kWh/month
Costs	**30,79**	**€/month**

Two-member household

Heating	69,19	kWh/month
Water heating	85,72	kWh/month
Other consumption of electricity	70,46	kWh/month
Total	225,37	kWh/month
Costs	**47,33**	**€/month**

Three-member household

Heating	87,85	kWh/month
Water heating	152,88	kWh/month
Other electricity consumption	89,67	kWh/ month
Total	330,41	kWh/ month
Costs	**69,39**	**€/** month

Four-member household

Heating	96,61	kWh/ month
Water heating	178,04	kWh/ month
Other electricity consumption	115,51	kWh/ month
Total	390,17	kWh/ month
Costs	**81,94**	**€/** month

Five-member household

Heating	113,53	kWh/ month
Water heating	222,56	kWh/ month
Other electricity consumption	132,35	kWh/ month
Total	468,44	kWh/ month
Costs	**98,37**	**€/** month

Table 1: Average cost of minimum energy consumption per month in Slovakia[30]

The average cost of the minimum prerequisite per month in € are calculated from the quantified energy value given in the previous tables and the average energy prices (electricity, gas and CPM or fuel).

[30] Slovak regulator report on energy poverty http://www.urso.gov.sk/sites/default/files/Koncepcia%20na%20ochranu%20odberatelov%20splnajucich%20podmienky%20energetickej%20chudoby.pdf

Head of household	Net household income	Expenditure for the energy	X_{max}
Economically active	5 606- €	428- €	0,076
Economically inactive	4 906- €	627- €	0,128
Arithmetical average	5 256- €	527,50 €	0,100

Table 2: Annual income and expenditure of private households in 2017 in € [31]

The arithmetic average for all households is Xmax = 0.100. This means that the average household energy expenditure is 10.0% of the total net household income. The disposable income does not include compensation allowances granted to persons with disabilities, overpayments of surcharges for medicines paid by health insurance companies, benefits paid due to an accident at work or an occupational disease, and sums insured paid by insurance companies under concluded commercial insurance contracts.

Assessing households for energy poverty is justified only for households in material need.

Concerning the main causes for energy poverty in Slovakia, the partner considers that they include: insufficient household income, inefficient heating, insufficient thermal insulation of buildings and high energy prices. There are also other causes of energy poverty in Slovakia, such as the unsatisfactory condition of the housing stock, the monopoly position of heat suppliers in central systems, their pricing policy and inadequate social housing systems.

The main groups at risk of energy poverty include seniors, who pay for heating of large houses, where the whole family originally lived. There are also households in the villages, single parents and the unemployed who live in houses or flats with high energy losses. Energy poverty is often the cause of distraint or further indebtedness - energy arrears are a one-off expenditure that low-income households cannot pay, and social support systems cannot respond to these one-off expenditures.

Low-income households don´t have the opportunity to change this situation, because they don´t have money for better insulation or replacement of the heating equipment, or they are just tenants. In the case of rental flats, it should be taken into consideration the owner and tenant dilemma: the owner has to invest into the renovation, but the energy savings are actually received by the tenant, so neither of them is motivated to invest in energy efficiency.

According to the data of EU Energy Poverty Observatory 5.1% share of Slovak population is not able to keep their homes adequately warm, based on the question "Can your household afford to keep its home adequately warm?" from the survey realized in 2016.

- 5% of property owners are unable to keep their homes adequately warm; 4.6% living in rented houses are not able to keep their homes adequately warm and 13.5% paying reduced/free rent are not able to keep their homes adequately warm.

[31] Slovak regulator report on energy poverty
http://www.urso.gov.sk/sites/default/files/Koncepcia%20na%20ochranu%20odberatelov%20splnajucich%20podmienky%20energetickej%20chudoby.pdf

- 4.7% of people unable to keep their homes adequately warm are living in densely populated areas of Slovakia, 5.5% live in areas of intermediate urbanization and 5% in thinly populated areas.
- According the dwelling type, there are 6.1% unable to keep their homes adequately warm living in detached homes, 5.1% in semidetached/terraced properties and 4.2% in apartments.

Regarding the gender issues in energy poverty, SOS explains that there isn't any specific data. But generally, it is claimed that women, especially single mothers in rural areas are more endangered by poverty in general.

As for the main causes for energy poverty in Slovakia, SOS responded with the following evaluation:

	Level of importance
Energy inefficient heating systems	Most Important
High energy prices	Most Important
Low income	Most Important
Energy inefficient building construction	Very Important
Location (urban, rural)	Very Important
Climate conditions	Very Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Important
Lack of knowledge and information on energy efficiency	Important

Fig.8 Assessment of main causes for energy poverty in Slovakia
Grade of importance: Not important < Less important < Important < Very important < Most important

III – MEASURES

Slovakia has adopted the following national programmes and strategies that are secondarily aimed at addressing the problems of energy poverty:

- *National Reform Programme (NRP)* - a document based on the Europe 2020 Strategy and presenting national policies and measures to sustain growth and jobs
- *National Employment Strategy of the Slovak Republic until 2020* - a cross-sectoral document that, with the contribution of the social partners, local governments and civil society, identified the mechanisms supporting the development of employment.
- *National framework strategy to promote social inclusion and fight poverty*
- Networking and development of public employment services
- *Revised National Action Plan of the Decade of Roma Inclusion* 2005 - 2015 for 2011-2015

- *Strategy of the Slovak Republic for Roma Integration by 2020*
- *Updated Action Plans of the Slovak Republic Strategy for Roma Integration up to 2020* for 2016-2018

The fight against poverty is based on the fulfilment of the three pillars that form active inclusion, namely: sufficient support for the beneficiary to prevent social exclusion, access to labour market integration and better access to quality services.

In order to support economic growth, more measures were adopted by Resolution of the Government of the Slovak Republic No. 227 of 15 May 2013. In the present resolution, several tasks with a direct impact on the issue of energy poverty were also imposed, for example:

- evaluation of the subsidy programme to support energy efficiency and securing financial means for the implementation of the measure in relation to the possibilities of the state budget
- evaluation of the implementation of the subsidy programme to support renewable energy sources and securing financial means for the implementation of the measure in relation to the possibilities of the state budget; in this context, it can be seen that the government is reluctant to adopt laws that will have an impact on rising energy prices
- provision of subsidies for the elimination of systemic failures of apartment buildings pursuant to Act no. 443/2010 Coll. on subsidies for housing development and social housing (Ministry of Transport, Construction and Regional Development of the Slovak Republic)
    - loans for the insulation of existing apartment buildings (State Housing Development Fund)
- developing employment programmes, including providing investment incentives to increase employment.

Other measures to reduce energy poverty in the Slovak Republic are:

- Family house insulation allowance (Ministry of Transport and Construction of the Slovak Republic) - a contribution intended to improve the energy efficiency of a family house by insulating peripheral walls, roof, internal partition structures between heated and unheated space and replacement of windows and doors
- Contribution to the installation of equipment for the use of renewable energy sources in households, provided from the funds of the European Regional Development Fund and the state budget of the Slovak Republic
- Subsidies for the installation of renewable energy plants in houses and flats, support may be up to 50% of installation costs
- Refunds for gas, which began to be issued by the Ministry at the turn of January and February 2017. Natural gas customers in tariff zones D1, D2 and D3 received a check in the amount of €10 to €165, representing 6 percent of their annual gas payment. About 47 M€ went to the gas return from the state budget
- Provision of subsidies for the elimination of system failures of apartment buildings pursuant to Act No. 443/2010 Coll. on subsidies for housing development and social housing (Ministry of Transport and Construction of the Slovak Republic);
- Loans for thermal insulation of existing apartment buildings (State Housing Development Fund)

United Kingdom

STEP Partner: CA (Citizens Advice Coventry, Reading & Manchester)

I - ENERGY POVERTY DEFINITION

Each of the devolved nations in the United Kingdom has adopted a separate legal definition of energy poverty, referred to as 'fuel poverty' in the UK. The different definitions make comparisons of the extent of fuel poverty across the UK difficult. Fuel poverty in England is currently measured according to the Low-Income High Costs (LIHC) indicator. Under the LIHC indicator, a household is considered to be fuel poor if:

- they have required fuel costs that are above average (the national median level)
- were they to spend that amount, they would be left with a residual income below the official poverty line (those receiving incomes below 60% of the median income after housing costs).

There is a second indicator referred to as the 'fuel poverty gap' – this is the reduction in a fuel bill that a fuel poor household needs in order to not be classed as fuel poor. Official statistics provide both an average fuel poverty gap figure and an aggregate fuel poverty gap figure – the sum of the individual gap for all fuel poor households.

The LIHC indicator measures fuel poverty using a relative approach in that it will vary according to changes in fuel costs across all households over time. The UK government recently consulted on a new approach to measuring fuel poverty which would entail, if agreed, moving to an 'absolute' approach. The new draft measure proposes that fuel poverty relates to any household on a low income living in a property below a threshold of Energy Performance Certificate (EPC[32]) C. The consultation period finished early September. The government has yet to publish its response to the consultation. However, it is highly likely that it will adopt the new measure.

Wales and Northern Ireland still use the old '10% definition' which was also used in England until 2014. This states that a household is in fuel poverty if it needs to spend 10% of more of its income on fuel to maintain satisfactory heating and meet its other energy needs. This is also an 'absolute' approach to measuring fuel poverty.

[32] EPCs measure the energy efficiency standards of homes, with A being very good and G very poor. Homes built today are expected to meet a standard of at least EPC C. Strictly speaking the government uses the 'fuel poverty energy efficiency rating' (FPEER) scale for setting its fuel poverty targets. This is very similar to the EPC scale but takes into account Warm Home Discount on energy bills. Many disagree with this approach.

Scotland is about to adopt a new definition: a household will be in fuel poverty if: (a) after having paid its housing costs, it would need more than 10% of its remaining net income to pay for its reasonable fuel needs, and (b) having paid for its reasonable fuel needs, its childcare costs and its housing costs, this then leaves the household unable to maintain an acceptable standard of living.

'Required fuel costs' is central to all of the definitions used in the 4 UK nations. 'Required fuel costs' differs from 'actual fuel costs' in that it is based on a technical assessment of the fabric and heating system in a property and the amount it costs to heat that home to recommended temperature standards and to meet other household energy needs.

The temperature standards are based on World Health Organization recommendations for heating regimes required for ensuring good health for occupants. WHO suggests a range of between 18 to 24°C for non-vulnerable households and 20°C minimum for vulnerable households. In England and Wales, a minimum of 18°C is recommended for most rooms, with the exception of living rooms for which 21°C is recommended. Fuel poverty statistics assume different heating regimes (length of time heating is on during the heating season) for different household types, e.g. longer heating regimes are assigned to pensioner households and families with young children. In Scotland, a 23°C threshold for living rooms and 20°C for all other rooms is assigned to vulnerable households.

Regarding CA's opinion on the definitions currently in use, CA responded that it did not agree with the LIHC indicator. This is because the indicator varies little year by year and therefore is unresponsive to changes in fuel prices or any changes resulting from policies (positive or negative). For example, official statistics estimated there were 2,43 million households in LIHC fuel poverty in 2003 and 2,46 million in 2010 (2,53M in 2017), despite this period being characterised by a rapid rise in fuel prices. The aggregate fuel poverty gap does vary more than the 'headcount' LIHC figure but few take much notice of it. Most want to know 'has the number of people in fuel poverty gone up or down'.

It is often argued that the problem is due to the LIHC indicator being relative. However, relative indicators of income poverty have been in use for many years, with the poverty threshold defined as those with an income below 60% of median income used in many countries. While this threshold will vary with changes in income over time, it is still possible (with sufficient political will!) to eliminate income poverty.

The main problem with the LIHC indicator relates to fixing the fuel cost threshold at median required fuel costs – this means there will always be 50% of households with fuel costs above the median and 50% below. The LIHC indicator also tends to under-estimate fuel poverty among households in small properties – many of which can be very energy inefficient – due to such properties being likely to have fuel costs below the median. Low income households generally live in much smaller properties than better off households.

The proposed new measure for England (the Low Income Low Energy Efficiency (LILEE) indicator) does represent an improvement on the LIHC indicator and will also increase the number of households classed as 'fuel poor' (to a more realistic but possibly still underestimated figure of 3,4 million) However, there is already evidence that many people in EPC C properties struggle to afford

their fuel bills. It could also mean that as (hopefully) energy efficiency standards raise across the general housing stock, low income households in EPC C properties may start falling behind the rest

of the population because the 'fuel poverty problem' will supposedly be fixed. Furthermore, EPC ratings do not take into account appliance use, yet this accounts for a growing proportion of household energy bills. Low income households are also much more likely to use inefficient appliances than better off households.

A number of respondents to the consultation therefore proposed that the government adopt a supplementary indicator that measured fuel poverty according to a socially determined level of energy services considered essential within today's society. This would also represent a 'relative' approach to measuring fuel poverty.

Regarding the partners' opinion on the need to adopt a common definition for energy poverty at the EU-level, CA agrees that it is a positive step, and explains that CA has supported BEUC's work on this issue. Much of this has focussed on the need to improve European surveys and databases of factors relating to energy poverty, such as energy performance of domestic buildings, domestic consumers' expenditure on energy, difficulties in keeping warm or cool.

A common definition would make it much easier to include energy poverty requirements in European Commission legislation, for example on clean energy, regulation and the internal energy market, as well as show which countries are making progress in tackling the problems and which aren't. However, there are many problems in adopting a common definition, not least the lack of good quality cross-European data. For example, the notion of 'required fuel costs' is central to the UK definition and is intended to address the fact that many low-income households ration their energy use, often to dangerous levels, to try and keep energy bills affordable. Yet many other European countries do not measure this and only have data on 'actual fuel costs.

A common definition should recognise people's needs for cooling as well as warmth – the former is a major problem for many low-income households across Europe, particularly in South and East Europe. The problem is also likely to increase for all countries as a result of climate change.

II - ENERGY POVERTY DIAGNOSIS AND CAUSES

The main source of information on fuel poverty in England is the English Housing Survey (EHS). This is a continuous survey with two components: an interview survey with 13,300 households each year and a physical inspection of a random sample of the dwellings of about 6,000 of the households included in the interview survey, as well as about 200 vacant properties. The interview surveys are conducted by trained interviewers and the physical surveys are carried out by qualified surveyors.

Both components collect data on energy efficiency and fuel poverty. The government publishes a detailed account of the methodology used for measuring fuel poverty. EHS data is always 2 years out

of date due to the time required for analysis and checking. However, the fuel poverty reports include projections of the main fuel poverty indicator and the gap indicator for the current year[33].

Note: energy vulnerability is defined differently to fuel poverty. The most common definition of energy vulnerability is the one developed by Ofgem, the energy market regulator[34]. This defines vulnerability as when a consumer's personal circumstances and characteristics combine with aspects of the market to create situations where they are:

- significantly less able than a typical consumer to protect or represent his or her interests in the energy market
- significantly more likely than a typical consumer to suffer detriment, or that detriment is likely to be more substantial.

This views vulnerability as a dynamic concept with vulnerability being transient for some consumers and long term for others.

The Commission for Customers in Vulnerable Circumstances, set up as an independent organisation by Energy UK (the energy suppliers' trade association), has just published a comprehensive and critical appraisal of suppliers' treatment of consumers in vulnerable circumstances[35].

According to the partner's research, the three main causes of fuel poverty are poor energy efficiency of dwellings and appliances, low income and high fuel prices. The Scottish Government also identifies a fourth cause: how energy is used in the home. The UK Government, responsible for fuel poverty policy in England, pays less attention to this factor.

Regarding the categories of groups that are most vulnerable to energy poverty in the UK, see the table below. Note: this data is for England only and is based on the current official LIHC indicator. The rates are therefore likely to change if the government adopts, as expected, the new LILEE indicator. The average fuel poverty rate for all households in England was 10.9% in 2017 (the latest year for which figures are available).

Groups with particularly high fuel poverty rates:

- People living in private rented properties: 19.4%
- Lone parents with dependent children: 25.4%
- Large families (5 or more people): 23.3%
- Ethnic minority households: 20.0%
- Part time workers: 17.3%

[33] The latest EHS data report is here:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/774820/2017-18_EHS_Headline_Report.pdf
The latest fuel poverty statistics reports are here:
https://www.gov.uk/government/collections/fuel-poverty-statistics
The latest fuel poverty methodology handbook is here:
https://www.gov.uk/government/publications/fuel-poverty-statistics-methodology-handbook.

[34] Ofgem recently updated its vulnerability strategy:
https://www.ofgem.gov.uk/about-us/how-we-work/working-consumers/protecting-and-empowering-consumers-vulnerable-situations/consumer-vulnerability-strategy.

[35] See:
www.energy-uk.org.uk/publication.html?task=file.download&id=7140

- Unemployed: 31.9%
- Lowest income decile: 42.4% (41.2% for the 2nd lowest decile)
- People paying for electricity by prepayment meter: 20.5% (19.9% for gas)

Data is also available on fuel poverty rates for dwelling characteristics:

- Properties with EPC rating of G: 23.4% (21.6% for EPC F)
- Converted flats: 16.4% (by comparison, the rate for purpose built flats is 5.7%)
- Older housing (pre-1919): around 18%
- Without mains gas: 15.9%
- Electric storage heaters: 20.7%
- Solid, uninsulated walls: 16.8%

Note: little difference is found between urban, rural and semi-rural areas

Regarding the figures on energy poverty, the official number of households in fuel poverty in England in 2017 was 2,53 million (10.9%)[36]. This figure will increase to around 3.66 million households or 15.9% if the UK Government's proposal for changing the measurement of fuel poverty (to all low-income households living in a property below EPC C) goes ahead. However, this figure will decrease quite quickly over time, assuming continuing improvements to properties with low EPC values, in contrast to the current measure of fuel poverty which varies little over time.

There is no current alternative estimate to the official figure. However, Consumer Focus (a predecessor organisation that merged with Citizens Advice in 2014) commissioned a major study which critiqued the LIHC approach to measuring fuel poverty. The report, 'Improving the Hills approach to measuring fuel poverty', estimated that there were 4.05 million households in fuel poverty in 2010 on its proposed alternative approach to measuring fuel poverty. The official LIHC fuel poverty figure in 2010 was 2.46 million households[37].

There is no data available in the UK specifically on gender. Fuel poverty data is given by household and 'head of household reference point', making it difficult to identify any differences in gender. The only data on gender that can be inferred relates to the proportion of lone parents in fuel poverty, given that 90% of lone parents are women. The latest fuel poverty rate for lone parent households is 25.4%, as stated above.

[36] Source: BEIS annual fuel poverty statistics report, 2019 (2017 data): https://www.gov.uk/government/statistics/annual-fuel-poverty-statistics-report-2019

[37] See: https://www.cse.org.uk/downloads/reports-and-publications/fuel-poverty/policy/energy-justice/improving-Hills-approach-to-measuring-fuel-poverty.pdf

As for the main causes for energy poverty in the UK, CA responded with the following evaluation:

	Level of importance
Energy inefficient building construction	Most Important
Energy inefficient heating systems	Most Important
Energy inefficient appliances (TVs, fridges, washing machines, etc)	Most Important
High energy prices	Most Important
Low income	Most Important
Location (urban, rural)	Very Important*
Lack of knowledge and information on energy efficiency	Very Important
Climate conditions	Important
Other(s): tenure – fuel poverty is particularly high among private renters in England, due to lack of regulation of the private rented sector, lack of tenants' rights and concentration of poor-quality housing in this sector.	

Fig.9 Assessment of main causes for energy poverty in the UK
Grade of importance: Not important < Less important < Important < Very important < Most important

*The aggregate data for fuel poverty in rural areas suggests there is little difference with fuel poverty in urban areas. This is probably because income levels, on average, are higher in rural areas than urban areas. However, there are a range of specific problems associated with tackling fuel poverty among those on low incomes in rural areas. These include much greater likelihood of not having mains gas (the cheapest heating fuel), higher proportion of detached and semi-detached housing (more expensive to heat than purpose-built flats), higher proportion of solid wall properties (expensive to insulate) and lower take up of benefits among eligible households.

Furthermore, it is generally more expensive to improve energy efficiency standards in rural properties for many of the reasons given above and also because of longer travel time for contractors and difficulty in achieving economies of scale[38].

[38] See Baker et al (2009), 'Quantifying rural fuel poverty': https://www.cse.org.uk/downloads/reports-and-publications/fuel-poverty/quantifying_rural_fuel_poverty.pdf

III – MEASURES

The key document that outlines the UK government's approach to tackling fuel poverty in England is 'Cutting the cost of keeping warm: a fuel poverty strategy for England', published 2015: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/408644/cutting_the_cost_of_keeping_warm.pdf. This set a target of improving, as far as reasonably practicable, all fuel poor homes to EPC C by 2030, with interim milestones of EPC E by 2020 and EPC D by 2025.

The main programmes for tackling fuel poverty or issues related to fuel poverty are:

- The *Energy Company Obligation* (ECO) – an energy efficiency programme delivered by obligated energy suppliers (those with more than 250,000 consumers) to low income and vulnerable households. Ofgem is responsible for administering the programme and making sure suppliers meet their targets. More information at https://www.gov.uk/energy-company-obligation and https://www.ofgem.gov.uk/environmental-programmemes/eco.

- The *Minimum Energy Efficiency Standards* (MEES) for the private rented sector. From 2018, private landlords cannot grant a tenancy to a new tenant for properties with an EPC rating of F or G. From 2020, landlords cannot continue to let a property with an EPC rating of F or G. Landlords are expected to improve their properties to the minimum standard up to a cost cap of £3,500. Landlords can apply for an exemption if costs exceed this or if the property has certain historical features. More information at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/794253/domestic-prs-minimum-standard-guidance.pdf

- The *Decent Home Standard* (DHS) sets a minimum housing quality standard for social housing in England which includes efficient heating and insulation. The main programme ran from 2006 to 2013, although some social housing providers are still improving homes to the standard. The programme had a major impact on improving energy efficiency standards in the social housing standard such that average EPC ratings for social housing are now significantly higher than other tenures.

- The UK government's *Clean Growth Strategy* (HM Government, 2017) has set the following targets:
    - all fuel poor homes improved to EPC C by 2030, as already set out in its 2015 Fuel Poverty Strategy
    - an aspiration for as many homes as possible to be EPC C by 2035 where practical, cost-effective and affordable
    - a long-term trajectory to improve privately rented homes to EPC C by 2030 where practical, cost-effective and affordable
    - Consult on how social housing can meet similar standards over this period.

These targets, unlike the Fuel Poverty Strategy, DHS and MEES regulations, are currently only 'aspirational' and are yet to be backed by legislation.

- The *Warm Home Discount* (WHD) scheme – an annual £140 rebate on electricity bills paid automatically to a 'core group' of pensioners in receipt of certain benefits (through a data matching process between electricity suppliers and the Department for Work and Pensions) and on an application basis to a 'broader group' of non-pensioner households in receipt of certain benefits. The core group is prescribed by government. Fuel suppliers have some discretion over the make-up of the broader group within certain prescribed boundaries. Ofgem is responsible for administering the scheme. More information at: https://www.gov.uk/the-warm-home-discount-scheme https://www.ofgem.gov.uk/environmental-programmemes/warm-home-discount-whd-scheme.

- The *prepayment meter tariff cap* came into force in April 2017. The cap is temporary, and applies to prepayment meter customers on a non-fixed deal and without an interoperable smart meter. Suppliers can price to the level of the cap or below it, but cannot charge more. There is a separate default tariff cap for consumers on a standard variable or default tariff. Ofgem is responsible for setting both caps. More information at: https://www.ofgem.gov.uk/gas/retail-market/market-review-and-reform/implementation-cma-remedies/prepayment-meter-price-cap

Fuel poverty campaigners have highlighted the lack of a publicly funded energy efficiency grant programme for low income households in England, unlike Scotland, Wales and Northern Ireland. The Coalition government of 2010-2015 first cut the publicly funded Warm Front grant programme in 2010 and subsequently abolished it completely in 2013.

Campaigners have also criticised the ECO programme for its focus on delivering energy efficiency measures at the lowest possible cost and the fact that suppliers are poorly placed to identify low income and vulnerable consumers. This has prevented take-up of ECO measures among particular groups, such as disabled people, low income families and households in remote rural areas. The government anticipated that suppliers would provide measures free of charge but in reality, suppliers often levy a charge on clients which many cannot afford to pay. Also, the charge can vary over the duration of the programme, according to how much progress suppliers have made on meeting their targets.

Furthermore, there is no requirement on suppliers to make sure that households receive other forms of help, such as benefits take-up, debt counselling, help with housing repairs and other services designed for people on low income and/or in vulnerable circumstances. Finally, the scale of ECO, at an estimated cost of £640m per year, is not sufficient for meeting the Government's Fuel Poverty Strategy target and milestones, even after taking into account the contribution of MEES.

The UK government has tried to address some of the problems with ECO by introducing a 'local flexibility' element. This gives local authorities the ability to refer households who do not meet standard ECO eligibility criteria (based on receipt of certain means-tested benefits) to ECO. Suppliers can meet up to 25% of their ECO targets through referrals from local authorities. The government

wants local authorities to refer people eligible for benefits but not claiming them and people on low incomes with health problems relating to cold homes. Local authorities, working with NGOs, are considered better able to identify vulnerable households than suppliers. Government guidance to local authorities on implementing local flexibility is here: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/776540/energy-company-obligation-3-LA-flexible-eligibility-guidance_.pdf

While local flexibility can help, many local authorities are not participating in the scheme, suppliers are not obliged to provide measures for households referred and suppliers can still require client contributions towards the cost of measures.

The House of Commons Business, Energy and Industrial Strategy Committee has just published the results of its inquiry into energy efficiency policy in England, including evidence submitted by a wide range of organizations, including Citizens Advice, National Energy Action, Association for Decentralized Energy, Energy Saving Trust, local authority organizations, fuel companies, energy efficiency contractors and many others[39].

The Committee noted the 'profound disparity' between public money invested in energy efficiency per capita in England compared to the devolved nations. It recommends that the Government invests public money into energy efficiency sufficient for meeting the targets laid out in the Clean Growth Strategy. It also highlights the many problems of relying on ECO and MEES alone for meeting the Government's fuel poverty targets.

The Government's official advisory body, the Fuel Poverty Committee wants the Government to introduce a publicly funded fuel poverty challenge fund, worth £1.1bn over 2 years, to bring the government back on track to meeting its first fuel poverty milestone (all fuel poor homes to reach EPC E by 2020)[40].

[39] Report and evidence available at: https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1730/1730.pdf
[40] See: https://www.gov.uk/government/publications/committee-on-fuel-poverty-annual-report-2018.

COMPARATIVE ANALYSIS OF RESULTS

In this part of the report we compare the partners' responses to the partner questionnaire (for more details see Annex 1). Below is a short summary of the replies received.

National Definition for Energy Poverty

The majority of the countries involved in STEP project (6 countries) do not have a legal definition of energy poverty. Only 3 countries: Cyprus, Slovakia and the United Kingdom currently have a legal definition.

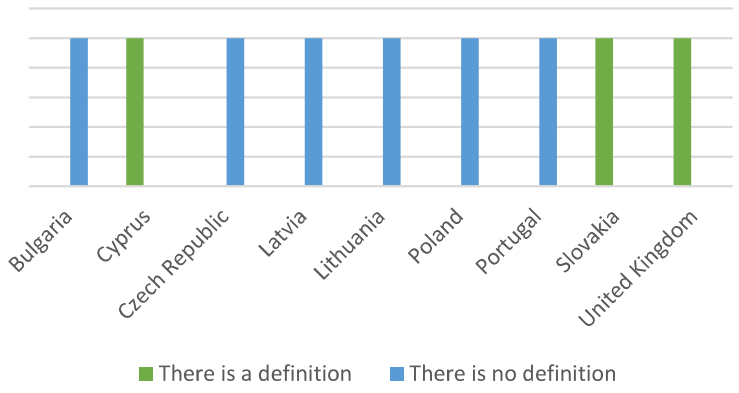

Fig.10 Does your country have a legal definition of energy poverty?

Only one partner answered positively to the question if they agree with their available national definition. The remaining partners disagreed and gave their reasons for this – see report for each national section.

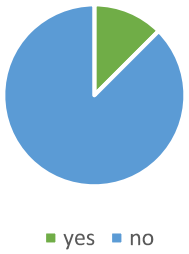

Fig. 11 Does your organization agree with the definition legally adopted or the definition used in the country by national authorities?

European definition for energy poverty

When asked about their opinion on the need to adopt an EU common definition of energy poverty, partners unanimously agreed there should be one. Their reasons are given in the report for each national section.

Gender disparities in energy poverty

As for gender issues and energy poverty, all partners have stated that is wasn't possible to find national data specifically relating to this issue. This is also reflected in the study requested by the FEMM (Women's Rights and Gender Equality) Committee of the European Parliament: "*Women, Gender Equality and the Energy Transition in the EU"* sic "*However, limited recognition of the problem of energy poverty by Member States is partly due to a deficit in understanding the issue of energy poverty in general and a lack of awareness of the gender dimension of the problem. This ignorance of a gender perspective on energy policy is widespread, not only with national and regional authorities, also within civil society organizations and academics. This is partly caused by the lack of evidence and gender-disaggregated data."*[41]

Evaluation of causes of energy poverty

The last graphic demonstrates partners' evaluation of the level of importance of causes for energy poverty. Partners' opinion varies considerably. Nevertheless, in some cases partners showed a common view on what concerns to the level of importance of certain causes for energy poverty in their countries.

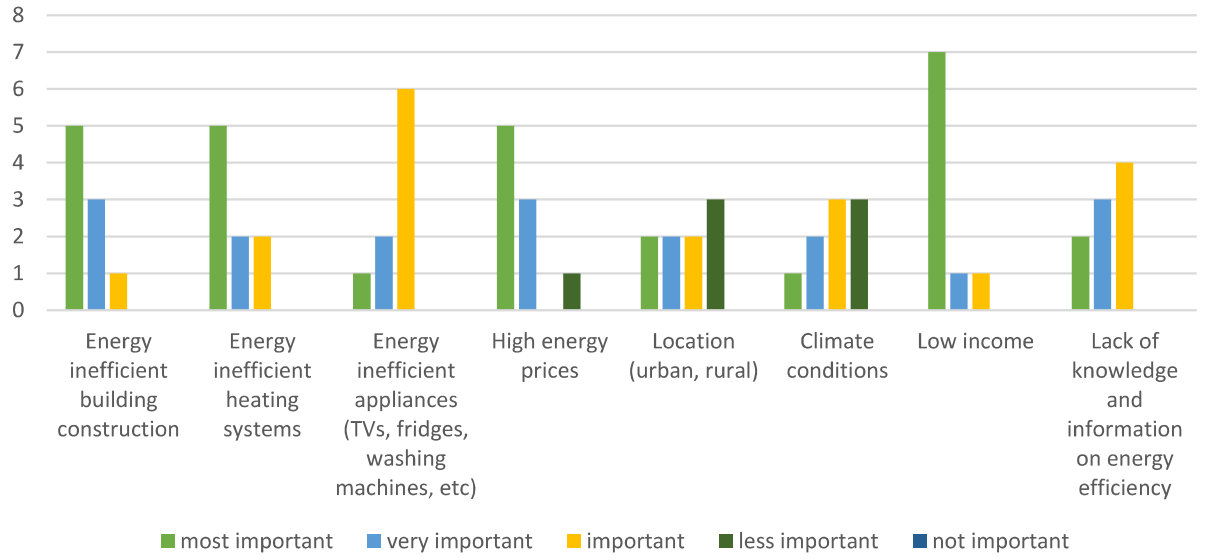

Fig.12 Level of importance of causes for energy poverty

[41] May 2019: https://www.europarl.europa.eu/RegData/etudes/STUD/2019/608867/IPOL_STU(2019)608867_EN.pdf, pages 35-39

The feature that deserved a more common opinion from partners is the low income, seven partners have answered that they consider this to be the most important cause for energy poverty. The second feature that gathered a higher common opinion is the energy inefficient appliances, six partners have considered it to be an important cause for energy poverty. High energy prices were evaluated as a most important cause by five partners, and three others considered it to be a very important cause for energy poverty. Energy inefficient buildings and energy inefficient heating systems were considered to be a most important cause for energy poverty by five partners.

The features that showed more divergent opinions between partners were location and climate conditions, as for location (urban/rural): three partners considered it to be a less important cause, two partners considered important, two others evaluated as a very important cause, and other two partners considered it to be a most important cause for energy poverty. As for climate conditions, only one partner considered it to be a most important cause, two partners evaluated it as very important, three others as important, and three other partners as a less important cause.

On average partners shared the opinion that the causes that contribute most for energy poverty in their countries are (presented by level of importance):

- Low income
- Energy inefficient building construction, energy inefficient heating systems and high energy prices
- Lack of knowledge and information on energy poverty and energy inefficient appliances
- Location (urban/rural)
- Climate conditions

ANNEX 1: Guidelines Template

I - ENERGY POVERTY DEFINITION

1 - Is there a legal definition of energy poverty in your country?

Yes ☐ No ☐

1.1- If yes, please indicate your national definition:

1.2 - If there isn't a legal definition is there any other form of definition for energy poverty adopted or recommended by national authorities?

Yes ☐ No ☐

1.2.1 - If yes, please indicate the definition:

1.3 - Does your organization agree with the definition you provided above (question 1.1 or 1.2.1)?

Yes ☐ No ☐ There is no definition ☐

1.3.1 - If no, please justify:

1.3.2 - If your country has not adopted a legal definition, what is the justification?

1.5 - Does your organization consider there should be a common European definition for energy poverty?

Yes ☐ No ☐

1.5.1 - Why?

II - ENERGY POVERTY DYAGNOSIS AND CAUSES

2 – For countries with a definition: How is energy poverty diagnosed? If there isn't a definition: How are vulnerable consumers identified? Is there any methodology to detect energy poverty in your country?
Please provide details.

3 – What are the causes for energy poverty in your country? Please try to answer this question even if there is not an official definition of energy poverty in your country.

4 – Please indicate the groups that are most vulnerable to energy poverty in your country. Please try to answer this question even if there is not an official definition of energy poverty in your country

5 – How many consumers are in an energy poverty situation in your country? Please state official number, if available, and any estimates from other organisations (always identify source of information), if these differ from the official number (you can also check EU Energy Poverty Observatory).

6 – Is there any data available considering gender issues? (e.g.: female consumers suffer more from energy poverty then male consumers, *vice-versa*)

7 - Please indicate the importance of the following causes for energy poverty in your country:
(1 – not important, 2 – less important, 3 – important, 4 - very important, 5 – most important)
You can repeat the grade of importance

	Level of importance
Energy inefficient building construction	
Energy inefficient heating systems	
Energy inefficient appliances (TVs, fridges, washing machines, etc)	
High energy prices	
Location (urban, rural)	
Climate conditions	
Low income	
Lack of knowledge and information on energy efficiency	
Other(s)	

III - MEASURES

8 – Please indicate the measures strategies, policies and programmes that are being/will be implemented in your country or that has been put in place to prevent/reduce energy poverty. Please include details of the agencies responsible for implementing any programmes, e.g. local government, energy companies, national agencies. Please also include details of any organisations that are officially responsible for scrutinising the government's policies (if any).

9 - If there are no or limited measures, strategies, policies and programmes, why do you think this is the case?

IV – INFORMATION AND DATA

10 – What are the main sources of information regarding energy poverty in your country?

Report/ Survey/ Database Title	Responsible Entity	Link to the document	Short summary

11 – Please indicate the main stakeholders that are currently working on energy poverty issues in your country?

Entity	Entity Short Description	Link to their website

ANNEX 2: Lists of national information and available data

List of main sources of information regarding energy poverty in **Bulgaria**:

Report/Survey/Database	Responsible Entity	Link to the document	Short summary
Energy poverty in Bulgaria, 2016	Open Society institute + Podkrepa CL	In Bulgarian: www.osi.bg/downloads/File/2016/energy4.pdf	Summary and review of definitions, policies, basic parameters of simulation of electricity consumption, an analysis of the situation in Bulgaria and recommendations.
"Reduce Energy Consumption and Change Habits" (acr. REACH project)	Energy Agency of Plovdiv	In English: http://reach-energy.eu/wordpress/wp-content/uploads/2014/12/D2.2-EAP_EN.pdf	Report on National situation in the field of fuel poverty - The document analyses national data on energy poverty, unemployment, difficulties that the households face in the payment bills, the conditions and the state of the building fund. The report examines the overall situation in the Bulgarian context in order to provide insight into the scope and depth of the energy poverty problem in the country.
National Action Plan on putting energy poverty in Bulgaria on the agenda (acr. REACH project)	Energy Agency of Plovdiv	In Bulgarian: http://reach-energy.eu/bg/wp-content/uploads/sites/4/2014/10/D5.1-National-action-plan-for-policy-work-Bulgaria-EAP.pdf	The purpose of the document is to analyse the current situation and to describe the planned activities required to address the problem of energy poverty in Bulgaria at the political level.
EnR Position Paper on Energy Poverty in the European Union January 2019	Sustainable Energy Development Agency	In English:http://enr-network.org/wp-content/uploads/ENERGYPOVERTY-EnRPositionPaper-January-2019.pdf	A European-level study on energy poverty issues and a Network Position with analysis and recommendations for implementing policies and measures to combat energy poverty.
IDEA Project - Report	Energy Agency of Plovdiv (the IDEA project is funded by the European Union's Erasmus+ programme)	In English:http://www.project-idea.eu/wp-content/uploads/2018/03/A4-Overall-Report.pdf	The report has presented the analysis of existing tools, methods and educational practices in the areas relevant for energy poverty, identification of knowledge gaps in existing tools, and the training needs assessment in the area of energy poverty in Bulgaria, Croatia, Cyprus and Slovenia, and made a comparison of these findings.
World Bank Report on Transitioning to Financial Stabilization and Market	Ministry of Energy and World Bank Report	In Bulgarian: https://www.me.government.bg/files/uploads/files/wb_ras_i_summary_report_bg.pdf	The document analyses the condition of households' access to energy for home heating, the income of different households and the risk of poverty, as well as the household energy expenditure. All these aspects are examined in the context

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Reform in the Energy Sector(resume)			of the government policies and strategies for financial measures for reorganization and full liberalization of the Bulgarian energy market. (p.7-8)
National Action Plan for Energy Efficiency 2014-2020, Sofia, Nov 2017	Ministry of Energy	In Bulgarian: https://www.me.government.bg/bg/themes/nacionalen-plan-za-deistvie-po-energiina-efektivnost-2014-2020-g-1991-469.html In English: http://www.seea.government.bg/documents/TRA%20BG%20NEEAP%202017%20EN.pdf	The NPEE complies with the requirements of Directive 2012/27 / EU on energy efficiency. NPEE presents the National Programme for the Energy Efficiency of Multi-Family Residential Buildings – the scope of the Programme, Financing, Admissibility Criteria for Buildings. The NPEE contains a list of energy efficiency measures and tools (p.51-52). Analyses Financial Mechanisms for Stimulating Energy Efficiency Measures in Bulgaria (p.87-95).
Integrated plan on energy and climate of the republic of Bulgaria to 2030, 2019	Ministry of Energy	In Bulgarian: https://www.me.government.bg/bg/theme-news/proekt-na-integriran-nacionalen-plan-za-energetikata-i-klimata-na-republika-balgariya-2691-m0-a0-1.html	Integrated national plan for energy and climate of The Republic of Bulgaria consists a brief description of the energy poverty in Bulgaria in the context of the EU policies for management of the energy union and the actions in the field of the climate. (p.41-42)
Opinion on the subject "*Measures for Overcoming Energy Poverty in Bulgaria*", 2015	Economic and Social Council, Republic of Bulgaria	In Bulgarian: http://www.esc.bg/bg/activities/opinions?start=9	The opinion analyses the reasons behind the energy poverty in Bulgaria and gives an overall picture of the situation in the country. The document examines the practice in the EU and the government measures against energy poverty. The opinion proposes concrete actions and directions for overcoming energy poverty.

List of main sources of information regarding energy poverty in **Cyprus**:

Report/Survey/Data base	Responsible Entity	Link to the document	Short summary
IDEA project - report	Energy agency of Plovdiv (The IDEA project is funded by the European Union's Erasmus + programme)	http://www.project-idea.eu/wp-content/uploads/2018/03/A4-Overall-Report.pdf	The report has presented the analysis of existing tools, methods and educational practices in the areas relevant for energy poverty, identification of knowledge gaps in existing tools, and the training needs assessment in the area of energy poverty in Bulgaria, Croatia, Cyprus and Slovenia, and made a comparison of these findings.

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Cyprus' Draft Integrated National Energy and Climate Plan for the period 2021-2030	Republic of Cyprus Department of Environment	http://www.moa.gov.cy/moa/environment/environmentnew.nsf/all/8D6EF81F38772607C225829400343871/$file/NECP_190123_1320_clean.pdf?openelement	This document is the Draft Integrated National Energy and Climate Plan (DINECP) for the period 2021-2030 submitted to the European Commission in accordance to the Governance Regulation. It presents the current policy situation in the fields of climate and energy, in addition to several policies that have been developed, are currently under development or are considered for the future. The achievement of the national GHG reduction target requires considerable effort and investments, especially in the field of transport.
Assessing member states' progress in alleviating the domestic and transport energy poverty nexus	The European Energy Poverty Index (EEPI)	https://www.openexp.eu/sites/default/files/publication/files/european_energy_poverty_index-eepi_en.pdf	The European Energy Poverty Index (EEPI) allows, for the first time, assessing progress made by Member States in alleviating both transport energy poverty, domestic energy poverty and their nexus. It does so by combining, in one single figure, the common metrics used for assessing the alleviation of causes of energy poverty with those assessing the alleviation of its symptoms as described in the EEPI framework below.
Fokaides, P. A., Polycarpou, K. & Kalogirou, S	Ministry of Energy, Commerce and Industry	https://ideas.repec.org/a/eee/enepol/v111y2017icp1-8.html	This study produced well justified conclusions concerning the decrease of the energy consumption of Cyprus social housing corporation buildings, as well as important findings concerning the appropriate indicators which should be used in the case of the analysis of buildings energy performance. Further findings of this study include the considerations of the end-energy use for the reliable comparison between the energy habits and the lifestyle of social housing occupants, and the importance of exploiting social housing buildings both for proving the effectiveness of building related energy policies, as well as to introduce novel future relevant policies.

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I. Kyprianou, D. K. Serghides, "Energy poverty in Cyprus and the use of geographic information systems," Proc. SPIE 10773, Sixth International Conference on Remote Sensing and Geoinformation of the Environment (RSCy2018), 107730K (6 August 2018)	The Cyprus Institute	https://www.researchgate.net/publication/326854961_Energy_poverty_in_Cyprus_and_the_use_of_geographic_information_systems	The aim of this paper is to provide a basis for the incorporation of GIS into the decision-making process, so that policy makers are able to effectively alleviate EP, while also promoting clean energy. This paper provides a brief review of the various types of GIS applications that can be used to study EP in Cyprus. The potential of the various forms of renewable energy technologies that could be adopted to supplement energy-poor households is also examined. Consequently, policies targeting at the mitigation of EP in Cyprus could be adjusted accordingly, based on regional characteristics derived from GIS studies, in order to provide energy vulnerable inhabitants with the most effective relieving schemes.
Family Intelligent Energy Saving Target Action (FIESTA) project	EASME (The project is funded by the European Union)	http://www.fiesta-audit.eu/en/the-project/	The **FIESTA** project helped in tackling energy poverty in Croatia, Bulgaria, Cyprus, Spain and Italy by providing families with door-to-door energy audits to help them understand their energy consumption and make energy-efficient decisions. The municipalities behind this project also set up and promoted consumer purchase groups or discount programmes with the support of consumer organizations, retailers, and installers, thereby allowing families to exploit their collective buying power to secure better deals on energy efficient products and RES installations.

List of main sources of information regarding energy poverty in the **Czech Republic**:

Report/Survey/ Database	Responsible Entity	Link to the document	Short summary
Study "*Measures against Energy poverty*", December 2016	SEVEn, Středisko pro efektivní využívání energie, o.p.s.	https://www.mpo-efekt.cz/upload/7799f3fd595eeee1fa66875530f33e8a/energeticka-chudoba-v12.pdf	Comparison of energy poverty in some EU countries, analysis of causes, list of existing programmes to prevent/reduce energy poverty, estimate numbers of energy poverty
STEM agency, survey, January – February 2019,	STEM Ústav empirických výzkumu, z.ú.,	https://www.stem.cz/naklady-na-vytapeni-ceskych-domacnosti-a-energeticka-chudoba-v-cr/#post-5733-footnote-1	

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List of main sources of information regarding energy poverty in **Latvia**:

Report/Survey/Database	Responsible Entity	Link to the document	Short summary
Surveys and research on energy prices and infrastructure in regional and at national level	Ministry of Economics	https://www.em.gov.lv/lv/nozares_politika/energijas_tirgus_un_infrastruktura/statistika_un_petijumi/	Surveys and research on energy prices and infrastructure in regional and at national level
Publications about social protection and social situation in Latvia	The Ministry of Welfare	http://lm.gov.lv/lv/nozares-politika/sociala-ieklausana/4-publikacijas	Publications about social protection and social situation in Latvia
Publications about conference materials and presentations about energy production and infrastructure in regional and at national level	Public Utilities Commission (PUC) of Latvia	https://sprk.gov.lv/content/prezentacijas-un-konferencu-materiali	Publications about conference materials and presentations about energy production and infrastructure in regional and at national level
Informative events and publications about energy efficiency and challenges and solutions for the refurbishment of multi-apartment buildings	Riga Energy Agency	http://www.rea.riga.lv/en/	Informative events and publications about energy efficiency and challenges and solutions for the refurbishment of multi-apartment buildings

List of main sources of information regarding energy poverty in **Lithuania**:

Report/Survey/Database	Responsible Entity	Link to the document	Short summary
Official Statistical Data base	Dept. of Statistics of Rep. of Lithuania	https://www.stat.gov.lt/web/guest/pajamos-vartojimo-islaidos-gyvenimo-salygos	General statistics regarding income, consumption expenditure, living conditions
Discussion on energy poverty materials	The Lithuanian District Heating Association (LDHA)	https://lsta.lt/aktualijos/diskusija-seime-energetinio-skurdo-priezastis-lietuvoje/	Academia and state institutions discussed energy poverty issues in January 2019. Discussion materials are available online.

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List of main sources of information regarding energy poverty in **Poland**:

Report/Survey/Database	Responsible Entity	Link to the document	Short summary
Ubóstwo energetyczne, wielowymiarowy wskaźnik ubóstwa	Institute for Structural Research	https://ibs.org.pl/publications/pomiar-ubostwa-energetycznego-w-polsce-z-uzyciem-wielowymiarowego-wskaznika-ubostwa-energetycznego/	Multidimensional energy poverty index using the methodology proposed by Alkire and Foster (2008)
Publication and reports	Institute for Structural Research	http://ibs.org.pl/en/ibs-publications/	Measuring energy poverty in Poland with the Multidimensional Energy Poverty Index

List of main sources of information regarding energy poverty in **Portugal**:

Report/Survey/Database	Responsible Entity	Link to the document	Short summary
Connect - Energy Efficiency for all - project	ADENE - National Energy Agency	https://ligar.adene.pt/	It's an initiative that aims to develop inclusive strategies to mitigate energy poverty and increase the energy efficiency among the population in disadvantaged socioeconomic conditions and info-exclusion. This will be achieved through the dynamization of field actions in ten parishes, distributed throughout the country. Energy and energy efficiency must be available to everyone, so this project is expected to foster behaviour change and contribute to reduction of energy poverty vulnerability of citizens.
Implementation of the Social Tariff in Portugal - study	ADENE - National Energy Agency and University of Coimbra	https://www.observatoriodaenergia.pt/pt/comunicar-energia/post/6146/estudo-1-aplicacao-da-tarifa-social-de-energia-em-portugal/	Study conducted by CeBER of the University of Coimbra for the Energy Observatory. The analysis of measures essentially aimed at reducing the energy bill shows that they are insufficient to address the problem of energy poverty. Despite highlighting the importance of the Social Energy Tariff, in the context of ensuring universal access to energy services, the study concludes that the Social Energy Tariff has little influence on the fight against energy poverty in our country.
Save Watts - project	Coopérnico - cooperative of renewable energies	https://www.coopernico.org/pt/faqs/2	Platform that shares tips on how to save electricity through energy efficiency, while also combating energy poverty. Available in both Portuguese and English on the Coopérnico website.
Gouveia, J.P., Seixas, J. (2016). Unravelling electricity consumption	João Pedro Gouveia CENSE-FCT NOVA	https://www.sciencedirect.com/science/article/pii/S0378778816300421	Use of smart meters daily electricity consumption records combined with socio-economic data and housing characteristics for the definition of consumer groups. One of the groups was identified as in energy poverty

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profiles in households through clusters: Combining smart meters and door-to-door surveys. Energy and Buildings. 116, 666–676.	Centre for Environmental and Sustainability Research		
Gouveia, J.P., Seixas, J., Long, G. (2018). Mining households' energy data to disclose fuel poverty: Lessons for Southern Europe. Journal of Cleaner Production	João Pedro Gouveia CENSE-FCT NOVA Centre for Environmental and Sustainability Research	https://doi.org/10.1016/j.jclepro.2018.01.021	Use of smart meters daily electricity consumption records combined with socioeconomic data and housing characteristics for analysis of contrasting consumer groups, potentially in energy poverty and energy "obesity". This analysis is further combined with thermal simulation of building typologies to assess the needs of buildings for space heating and cooling.
Gouveia, J.P., Palma, P. Simoes, S. (2019). Energy poverty vulnerability index: A multidimensional tool to identify hotspots for local action. Energy Reports 5, November 2019, pp. 187-201	João Pedro Gouveia CENSE-FCT NOVA Centre for Environmental and Sustainability Research	https://doi.org/10.1016/j.enbuild.2019.03.002	Development of a multidimensional index to evaluate energy poverty at parish scale. It combines climate information, with building characteristics, socioeconomic data of the population and energy consumption and needs.

List of main sources of information regarding energy poverty in **Slovakia**:

Report/Survey/Database	Responsible Entity	Link to the document	Short summary
Proposal: A concept for the protection of consumers filling the conditions of energy poverty	National Regulator	https://www.slov-lex.sk/legislativne-procesy/SK/LP/2019/332	The Office for Regulation of Network Industries in cooperation with the Ministry of Economy of the Slovak Republic (MoE SR), Ministry of Finance of the Slovak Republic (MoF SR) and Ministry of Labour, Social Affairs and Family of the Slovak Republic (MoLSAF) suggests options for addressing the issue of energy poverty at national level and opportunities arising from the competences of the Authority and other state administration bodies, as energy poverty needs to be addressed comprehensively with the participation of all the ministries involved.

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List of main sources of information regarding energy poverty in the United Kingdom:

Report/Survey/Database	Responsible Entity	Link to the document	Short summary
Fuel poverty statistics	Business, Energy & Industrial Strategy department	https://www.gov.uk/government/collections/fuel-poverty-statistics Statistics for previous years can also be found here	Brings together all the UK government's fuel poverty statistics for England: Annual fuel poverty statistics report: 2019 Fuel poverty trends 2019 Fuel poverty sub-regional statistics Fuel poverty detailed tables 2019 Sub-regional fuel poverty 2019 Note all statistics relate to 2017 data
Cutting the cost of keeping warm: a fuel poverty strategy for England	HM Government	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/408644/cutting_the_cost_of_keeping_warm.pdf	Sets out the UK Government's approach to tackling fuel poverty in England, its fuel poverty targets and milestones and its approach to measuring fuel poverty
English Housing Survey	Ministry for Housing, Communities & Local Government	https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/774820/2017-18_EHS_Headline_Report.pdf	National annual survey of people's housing circumstances and the condition and energy efficiency of housing in England.
Fuel Poverty Committee annual report 2018	Fuel Poverty Committee	https://www.gov.uk/government/publications/committee-on-fuel-poverty-annual-report-2018.	The Fuel Poverty Committee is the government's advisory body on fuel poverty - responsible for tracking progress on meeting the target and milestones. The latest annual report highlights the lack of progress on meeting its 1st fuel poverty milestone and recommends a £1bn publicly funded energy efficiency programme to bring it back on track.
Policy pathways to justice in energy efficiency	UKERC, ACE research & York University	http://www.ukerc.ac.uk/publications/policy-pathways-to-justice-energy-efficiency.html	A series of reports that provide a good critique of the Energy Company Obligation.
UK Fuel Poverty Monitor 2018	National Energy Action	https://www.nea.org.uk/resources/publications-and-resources/uk-monitor-2018/	An annual review that gives a useful overview of fuel poverty policies and programmes in all the 4 UK countries, including comparisons of their relative effectiveness
Frozen out – extra costs faced by vulnerable consumers in the energy market	Citizens Advice, 2017	https://www.citizensadvice.org.uk/about-us/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/frozen-out-	Looks at the current gap between costs faced by consumers and current investment in helping vulnerable households reduce their bills, concluding with some recommendations for how this gap could be closed.

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		extra-costs-faced-by-vulnerable-consumers-in-the-energy-market/	
'Fuel poverty: from cold homes to affordable warmth' (1991) and 'Fixing fuel poverty' (2010)	Brenda Boardman		Brenda Boardman was for many years the pre-eminent academic on fuel poverty and was instrumental in highlighting the issue. These are her two best known books on the subject.
Excess winter deaths and illness and the health risks associated with cold homes (2015)	NICE (National Institute for Health and Clinical Care Excellence)	https://www.nice.org.uk/guidance/ng6	There is a growing emphasis in fuel poverty policy on the health benefits of tackling fuel poverty, particularly through improving the energy standards of homes. This guideline, which aimed to improve the engagement of the health sector in fuel poverty work, is a key driver of this work.
The health impacts of cold homes and fuel poverty (2011)	Marmot review team	http://www.instituteofhealthequity.org/resources-reports/the-health-impacts-of-cold-homes-and-fuel-poverty.	he 2011 Marmot report on the health impacts of cold homes and fuel poverty is also well worth looking
Energy efficiency: building towards net zero	BEIS select committee	https://publications.parliament.uk/pa/cm201719/cmselect/cmbeis/1730/1730.pdf	The BEIS select committee scrutinises the work of the BEIS department (responsible for energy policy). This report is an in-depth examination and critique of the UK government's energy efficiency and fuel poverty policies

Note: reports relate mainly to England (Scotland, Wales and Northern Ireland not included)

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List of main stakeholders that are currently working on energy poverty issues in **Bulgaria**:

Entity	Entity Short Description	Link to their website
Ministry of Labour and Social policy	-Develops and has responsibilities for the state social assistance policy by providing assistance in cash and or in solid fuel (wood or coal). This policy aims to meet the basic living needs of citizens, in accordance with the ordinance № RD 07-5 / 2008 on targeted aid for heating according to the type of heating.	https://www.mlsp.government.bg/index.php?section=POLICIES&P=218
Social Assistance Agency	-Implements the state social assistance policy, one of the measures provides targeted aid for heating according to the type of heating.	http://www.asp.government.bg/
Ministry of Energy	-Develops and has responsibilities for the national energy policy and for the improvement of the energy efficiency and the reduction of greenhouse gas emissions, in line with the priorities of the Europe 2020 strategy. Develops a national energy efficiency action plan (2014-2020).	https://www.me.government.bg
Sustainable Energy Development Agency	-Implements the state policy on improving energy efficiency in the final consumption and the provision of energy services. Works on various energy efficiency improvement projects, incl. In the European energy network to tackle energy poverty in the EU.	https://www.seea.government.bg
Ministry of Regional Development and Public Works	-Develops and has responsibilities for the implementation of the reform in the regional development of the country, the territorial development and planning, the construction of the main networks and facilities of the technical infrastructure. Coordinator of the National Programme for the Energy Efficiency of Multi-Family Residential Buildings. Responsible for the development of a National Housing Strategy and national programmes for its implementation.	https://www.mrrb.bg
Ministry of Environment and Water	-Develops and implements the state environmental policy, as its main aspects are related to strategic planning – elaboration of national plans and strategies; implementation of sector policies – water, waste, climate, air, nature, soils, noise, radiation; prevention activities – regulatory and control functions for prevention of pollution of the environment.	https://www.moew.government.bg
Energy Agency Plovdiv	-Energy Agency-Plovdiv (EAP) is the first energy agency in Bulgaria under the EC SAVE programme. EAP initiates and coordinates projects aimed at reducing energy consumption and the use of efficient and renewable energy technologies. EAP promotes energy efficiency (EE) and renewable energy sources (RES), develops action plans, and performs feasibility studies promoting sustainable energy development. Partner in IDEA and REACH projects, contributing to the	https://www.eap-save.eu

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	analyse of the energy poverty in Bulgaria and proposes actions for the overcoming of this phenomenon.	
Sofia Municipality	-Partner for the Campaign for Free Replacement of Old Solid Fuel Stoves. 20,000 households will be covered on the territory of Sofia Municipality. The campaign is funded by two financial mechanisms, with the aim of replacing the heating equipment within three years.	https://www.sofia.bg/web/guest/bitovootoplenie
Regional energy agency - Sofia	-To assist Sofia Municipality in developing a sustainable energy policy; - To develop models for Sofia Municipality energy planning and to support their implementation; -To involve the intellectual potential of the capital city in solving problems, concerning energy efficiency and implementation of new energy saving and ecological technologies; -To reveal possibilities and to participate in projects, financed by foreign institutions, in the area of sustainable energy policy, energy savings and ecology; -To contribute to the dissemination of positive experience of finalized projects in the area of energy efficiency, new energy sources and clean technologies; -To carry out research and to propose solutions for the implementation of new schemes for financing energy efficiency projects;	https://sofena.com/en/

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List of main stakeholders that are currently working on energy poverty issues in **Cyprus**:

Entity	Entity Short Description	Link to their website
Research Centre for Sustainable Energy (FOOS)	The Research Centre for Sustainable Energy (RCSE) was created in order to play a key role in research and technological development activities in the field of sustainable energy within Cyprus and at international level with the aim of contributing to the achievement of the relevant energy and environment objectives set out by Europe. In particular, the RCSE strives to become a centre of excellence in energy that will act as a structure where world-standard R&D work can be performed, in terms of measurable scientific production (including training) and/or technological innovation. The selected thematic priorities include: • Renewable energy sources (RES) with an emphasis on solar energy • Distributed generation and new technologies for electrical power systems • Smart electricity networks • Enabling technologies including energy storage and ICT, which are necessary for developing a smart grid environment • Energy efficiency and energy saving • Energy efficient buildings • Energy Policy and Energy economics • Education and awareness work on sustainable energy matters and promotion of active involvement of consumers in local energy production using RES.	http://www.foss.ucy.ac.cy/
Research and Innovation Centre of Excellence (KIOS)	The KIOS CoE is the largest research and innovation centre in Cyprus on Information and Communication Technologies (ICT) with an emphasis on monitoring, control, management and security of critical infrastructures such as electric power systems, water	https://www.kios.ucy.ac.cy/

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	distribution networks, telecommunication networks, and transportation systems. The goal of the Centre is to conduct outstanding interdisciplinary research and innovation and produce new knowledge and tools that can be applied to solve real-life problems. The Centre collaborates with an extended network of national and international academic, industrial, and governmental organizations to assure that its research has maximal applicability and impact.	
SEIT lab, Department of Computer Science- University of Cyprus	The Department of Computer Science, participates in European project (IDEA Project) for the reduction of the energy poverty in Cyprus.	https://www.cs.ucy.ac.cy/seit/
The Energy, Environment and Water Research Centre- The Cyprus Institute	The work and collaborations focus on societally relevant issues related to Energy and Renewables, Environment, Atmosphere and Climate, Water and Natural Resources. Over the past few years, EEWRC has proven to be a leader in the area of Environmental, Atmospheric and Climate research. The Atmospheric and Climate Research Division in particular, in close co-operation with the Max Planck Institute for Chemistry in Mainz, Germany, the Alternative Energies and Atomic Energy Commission (CEA) in France, and the University of Helsinki (UHEL) in Finland, have established the CyI's EEWRC as a key player of Atmosphere and Climate Research in the region and beyond.	https://www.cyi.ac.cy/index.php/eewrc/about-the-center/eewrc-overview.html
Cyprus Energy Agency	The Cyprus Energy Agency is an independent, non-governmental, non-profit organization founded in 2009. The establishment and operation of the Energy Agency was co-funded by the European Commission through the Intelligent Energy for Europe Programme and the Union of Cyprus Communities for three years. To contribute actively to saving energy resources, protecting the environment and improving the quality of life. Its goals are promoting renewable energies energy sources, sustainable transport, of energy efficiency and addressing and adapting to climate change.	http://www.cea.org.cy/en/

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List of main stakeholders that are currently working on energy poverty issues in the **Czech Republic**:

Entity	Entity Short Description	Link to their website
Energy Regulatory Office	National energy regulator has power to price controls, support for competition, supervision over market, support for the use of renewable and secondary energy sources, support for the combined heat and power generation, support for biomethane, support for the decentralized energy production and protection for customers interests.	www.eru.cz
Ministry of Industry and Trade	Preparing State Energy Policy and other related documents. Preparing energy legislation (including renewables and energy efficiency). Special department focused on energy efficiency and savings.	www.mpo.cz
Ministry of the Environment of the Czech Republic	Main agenda relating to Energy is concerning to energy efficiency and energy savings.	www.mzp.cz
Ministry of Labour and Social Affaires	Responsible for social policy including social services and social benefits, employment support, focused on poverty, organising events relating energy poverty and energy efficiency.	www.mpsv.cz
State energy inspection	Focuses on supervising the fulfilment of obligations of builders or property owners, energy specialist and supervision of the energy related products on the market.	www.cr-sei.cz

List of main stakeholders that are currently working on energy poverty issues in **Latvia**:

Entity	Entity Short Description	Link to their website
EAPN - European Anti-Poverty Network-Latvia”	Association „EAPN-Latvia” was founded on October 9, 2013 by 7 non-governmental organizations: Latvian Red Cross, Association “Skalbes”, IWO - International Women's Organisation, SOS Children’s Villages Latvia, Riga Alliance of Active Seniors, Latvian Association of Addiction Psychologists and Association “PINS”, and	http://www.eapn.lv/index_en.php

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	currently has 34 member organisations and 3 associated members.	
Jelgava Apartment Owners Association	Regular communication with local media about energy prices in local municipality	http://www.zz.lv/vietejas-zinas/jelgava/dzivoklu-ipasnieki-nav-miera-ar-maksimalo-pvn-maju-apsaimniekosanai-206780 http://www.zz.lv/vietejas-zinas/jelgava/jauna-aile-fortum-rekina-prasa-skaidrojumu-213297
Latvian National Association for Consumer protection and its 10 network organizations	Regular seminars and training for the regional consumer NGOs about electricity and gas market, Billing and tariffs, etc.	http://pateretajs.lv/index.php/lv?start=25
Jelgava Pensioners' Association	Jelgava Pensioners 'Association protect the social interests and rights of the Latvian pensioners.	https://www.jelgavasvestnesis.lv/pilseta/jelgavas-pensionaru-biedriba-aicina-uz-kopsapulci-un-pasakumiem
Charity organization "*Centre for Creative Thought and Work*" Svetelis	Local level charity organization, one–stop agency for poor inhabitants of Jelgava and Ozolnieki.	http://svetelis.mozello.lv/

List of main stakeholders that are currently working on energy poverty issues in **Lithuania:**

Entity	Entity Short Description	Link to their website
Government	Ministries of Energy, of Environment and of Social Affairs and Labour are the ones participating in the debate	http://lrv.lt/en/
EAPN Lithuania	Network of 51 national and local poverty fighting organisations.	http://www.stopskurdas.lt/
ALAL (Association of Local Authorities in Lithuania	ALAL represents the common interests of its members – local authorities in all national institutions, as well as in international organizations of local authorities.	http://www.lsa.lt/en/
VERT (National Energy Regulatory Council)	With retail market liberalisation taking of in 2020, VERT will take an active role in discussions on tariffs.	https://www.vert.lt/en/Pages/updates.aspx
LDHA (The Lithuanian District Heating Association	LDHA represents the interests and rights of the Lithuanian District Heat utilities, organisations and others associated energy structures in the DH sector.	https://lsta.lt/en/

List of main stakeholders that are currently working on energy poverty issues in **Poland:**

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Entity	Entity Short Description	Link to their website
Urząd Regulacji Energetyki	Energy Regulatory Office	https://www.ure.gov.pl/en/about-us
Tauron Polska Energia	Energy Operator	https://www.tauron.pl/dla-domu
Energa Operator	Energy Operator	www.energa.pl
Enea	Energy Operator	www.ena.pl
PGE	Energy Operator	www.gkpge.pl
NFOŚiGW	National Fund for Environmental Protection and Water Management	https://www.nfosigw.gov.pl/en/
PTPIREE	Polish Power Transmission and Distribution Association	http://en.ptpiree.pl/
NAPE	National Energy Conservation Agency	https://nape.pl/en/home
KAPE	Polish National Energy Conservation Agency	https://www.kape.gov.pl/page/about-us?
Polski Komitet EAPN	The European Anti-Poverty Network (EAPN)	http://www.eapn.org.pl/o-eapn/info-o-eapn-polska/
Banki Żywności	Food Banks	https://bankizywnosci.pl/

List of main stakeholders that are currently working on energy poverty issues in **Portugal:**

Entity	Entity Short Description	Link to their website
CENSE	Centre for Environmental and Sustainability Research, Lisbon Nova University, promotes interdisciplinary research in environmental sciences and engineering, focusing on the interaction between human and ecological systems, to promote sustainable development.	https://www.cense.fct.unl.pt/
ADENE	National Agency for Energy	https://www.adene.pt/
UNIVERSIDADE COIMBRA Centre for Business and Economics Research - CeBER	Centre for Business and Economics Research of Coimbra University	https://www.uc.pt/en/uid/ceber
COOPÉRNICO	Green Energy Cooperative	https://www.coopernico.org/
ZERO – Environmental Association	Association for the Sustainable Land System, they were partners on the dissemination of the "European Energy Poverty Index: Assessing Europe's Energy Inequality" based on DG Energy ad-hoc data collection. (Source: Energy Prices and Costs, SWD, DG Energy).	https://zero.ong

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List of main stakeholders that are currently working on energy poverty issues in **Slovakia:**

Entity	Entity Short Description	Link to their website
Regulatory Office for Network Industries	State regulator	http://www.urso.gov.sk/?language=en
Ministry of economy, Department of Energy Policy	Government	https://www.mhsr.sk/energetika
Association of Energy Suppliers	Covers all relevant energy providers active on Slovak market	https://www.zde.sk
Ministry of labour, social affairs and family	Government	employment.gov.sk/sk/rodina-socialna-pomoc/boj-proti-chudobe/
Government Plenipotentiary for Roma Communities	Government	http://www.minv.sk/?romske-komunity-uvod

List of main stakeholders that are currently working on energy poverty issues in the **United Kingdom:**

Entity	Entity Short Description	Link to their website
National Energy Action	The main fuel poverty charity in England, Wales and Norther Ireland. NEA has a sister organisation in Scotland: Energy Action Scotland	www.nea.org.uk
Citizens Advice	Citizens Advice is both the main provider of free, independent advice on a wide range of issues, including energy, and is the statutory representative for energy consumers in Great Britain. There is a sister organisation in Scotland: Citizens Advice Scotland.	www.citizensadvice.org.uk. See in particular: https://www.citizensadvice.org.uk/about-us/policy/policy-research-topics/energy-policy-research-and-consultation-responses/energy-policy-research/ and https://www.citizensadvice.org.uk/about-us/how-we-provide-advice/our-prevention-work/BESN/
End Fuel Poverty Coalition	Brings together poverty, environmental and consumer organisations with the aim of campaigning for an end to fuel poverty	www.endfuelpoverty.org.uk
Centre for Sustainable Energy	Provides both energy advice and research on sustainable energy, with a substantial body of work on fuel poverty	www.cse.org.uk

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ACE research (now part of ADE)	Has carried out a considerable amount of research on energy efficiency and fuel poverty	https://www.theade.co.uk/what-we-do/ace-research
Fuel Poverty Researchers Network	Brings together academic and other researchers with those engaged in policy and practice at 2 events per year	http://www.fuelpovertyresearch.net/
Association of Local Energy Officers (ALEO)	A network of local authority energy officers – strong focus on fuel poverty	https://aleo.org.uk/
Eaga Charitable Trust	A major independent funder of fuel poverty research and support for postgraduate students/early career researchers. The trust is closing at the end of 2019; however, it is setting up a fuel poverty library and related resources before it closes.	https://www.eagacharitabletrust.org/

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