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Executive Summary:

Aim of this document is to present the analysis of existing tools, methods and educational practices in the areas relevant for energy poverty, identification of knowledge gaps in existing tools, relevant stakeholders in the are of energy poverty and adult education, and the training needs assessment in the area of energy poverty.

Purpose of the analysis being done and this document is to develop an up to date overview of quality learning practices relevant for the area of energy poverty, thereby improving the existing educational practices on the topic by highlighting the most participatory, innovative and efficient methods and practices that exist throughout Europe in order to make them available to the interested institutions dealing with training of adults, CSOs and other stakeholders.

The analysis show that in Bulgaria there is no still a clear definition for Energy poverty. It could be said that a household is considered to be energy poor if it has difficulty meeting its main energy needs. Energy-poor households spend a disproportionately large part of their income on energy - more than 10% to meet their energy needs. Another definition that is commonly used in the EU is: a household that spends twice as much energy over the median energy costs nationwide.

In Bulgaria, there are no existing educational programme, specifically related to Energy poverty issue, but some relevant materials including social and energy aspects could be found, for example, the materials developed in REACH and ACHIEVE projects, which deal with energy poverty. In the process of identifying existing materials and training practices has highlighted the useful documents, which can extract information about the mentioned above three aspects.

The identification of relevant stakeholders is based on GA statement that the target users of the project outcomes would be mainly:

- institutions active in adult training,
- social organisation active in energy poverty, social services, human rights, environmental etc.

In addition, we identified other relevant stakeholders that are engaged with social activities, and that would be interested in project outcomes and through which, the final beneficiaries could be easily reached. They can be summarized as follows:

- National and local authorities
- Energy agencies and centres
- Universities
- Employment agencies and Labour offices

The most important conclusions from the surveys could be summarized as follows: More than 50% of the respondents are familiar with the issue of energy poverty. 48,6% of the participants have indicated that in their work they rarely come across the topic of energy poverty. 45,7% think that the issue of energy poverty is very important. The most suitable tools for respondents' involvement in

energy poverty is database on energy poverty in households. Most of the respondents are interested in implementation of structural measures and energy advising and auditing approaches.

The biggest share of respondent have indicated that they need more knowledge and external support in "policies and measures" and in cooperation with different stakeholders. The topics, that are indicated as most important for education about energy poverty are: "Social security aspect and related services (to be able to identify problem and give advice to household" and "Energy use of domestic devices and appliances." Most of the respondents find the Practical part (energy advising, implementing measures, saving devices) as most important training sets for modules.

Contents

Contents	5
Introduction	6
About the project	6
1. Existing tools, methods and educational practices for trainings in the areas relevant for energy poverty	6
2. Relevant stakeholders in the area of energy poverty and adult education	.10
3. Training needs assessment in the area of energy poverty	.16
3.1 Understanding of energy poverty and involvement in the topic	.16
3.2 Stakeholders' needs in the are of energy poverty	.19
3.3 Households' needs in the are of energy poverty	.22
3.4 Form of educational materials and tools on the topic of energy poverty	.23
3.5 Content of educational materials and tools on the topic of energy poverty	.25
4. Country specifics on energy poverty	.28

Introduction

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Purpose of the analysis being done and this document is to develop an up to date overview of quality learning practices relevant for the area of energy poverty, thereby improving the existing educational practices on the topic by highlighting the most participatory, innovative and efficient methods and practices that exist throughout Europe in order to make them available to the interested institutions dealing with training of adults, CSOs and other stakeholders.

About the project

IDEA (Innovative Direction in Energy Advising) project's purpose is to develop innovations in education about energy poverty. Main objective is to improve existing and develop new innovative educational methods and materials for adult training on energy poverty. The partnership consists of experienced organizations strategically places in the most affected region regarding energy poverty - in Bulgaria, Croatia, Slovenia and Cyprus. Project is implemented by University of Cyprus, DOOR Society for Sustainable Development Design, Energy Agency Plovdiv and Focus Association for Sustainable Development. It is funded by Erasmus+ programme.

1. Existing tools, methods and educational practices for trainings in the areas relevant for energy poverty

In Bulgaria, there are no existing educational programme, specifically related to Energy poverty issue, but some relevant materials including social and energy aspects could be found, for example, the materials developed in REACH and ACHIEVE projects, which deal with energy poverty. In the process of identifying existing materials and training practices has highlighted the useful documents, which can extract information about the mentioned above three aspects.

The identified existing tools, methods and educational practices that could be used for developing the IDEA educational program are shown in the following table:

No.	Name of the tool	Author/Institution	Short description of the tool	Format of the tool
1	REACH Energy auditors Guidance	Energy Agency of Plovdiv, REACH partners	A document, developed in the framework of REACH project, that deals with Energy poverty issues and solutions	educational material (text)
2	Energy Auditor in households presentation	ACHIEVE partners	Presentation developed in framework of ACHIEVE project	other: Presentatio n
3	ACHIEVE_ENER GIJNATA_BEDNO	ACHIEVE partners	Presentation developed in framework of ACHIEVE project	educational material

	ST			(text)
4	Energy poverty National Action Plan	Energy Agency of Plovdiv	The purpose of this document is to analyse the existing situation and to describe the planned activities needed to put the problem of energy poverty in Bulgaria at a political level.	educational material (text)
5	Energy performance of Buildings Software	SEEA	Based on the Energy performance of Buildings Directive	ICT tool
6	Energy efficiency in households	SEEA	ICT tool for energy consumption assessment	ICT tool
7	CO2 emissions calculator	Energy Agency of Plovdiv	Web-based tool for calculating CO2 emissions from different energies	ICT tool
8	Energy Efficiency Policies and Measures in Bulgaria	SEEA	Document implemented in the framework of the project "Monitoring the Implementation of the European and National Energy Saving Goals - ODYSSEE-MURE	educational material (text)
9	Energy Poverty in Bulgaria Report	Open Community	Document - report on Energy poverty situation in Bulgaria	educational material (text)
10	Energy savings in households Platform	EnerGbg	The EnerGbg platform responds to the need to share more information about this: How can energy be used more efficiently by households; How can energy bills be reduced; How it is possible to reduce the release of harmful emissions into the atmosphere.	ICT tool
11	Teacher's Guide	Bimec, COOSS MARCHE, Mozaik, Partenalia, VM, Waterpolis	A teacher's guide has been developed within the framework of the Lifelong Learning program life "under the IGTrain Project:" Trained to Train - Transfer the Knowledge Acquired to workplace, from generation to generation ". The aim of the manual is to give teachers and training organizations information on the procedures for developing and implementing the training program of the trainers	educational material (text)
12	Methodology for "Social	AGENCY FOR SOCIAL	The methodology regulates the process of provision of the service in	educational material

	Accietance"	ASSISTANCE	the "Social Assistant" community in	(toxt)
	Assistance" service providing	ASSISTANCE	the "Social Assistant" community in accordance with the requirements of the minimum quality standards for this service, stipulated in the Regulation on the Application of the Social Assistance Act.	(text)
13	Energy Master Training - Powerpoint Presentation	Energy Agency of Plovdiv	Presentation developed in framework of Energy Neighbourhoods project	other: Presentatio n
14	Energy Masters handbook	EN2 project partners	Document developed in framework of Energy Neighbourhoods project	educational material (text)
15	Energy Saving Tips	DOMINO project partners	Document developed in framework of DOMINO project	educational material (text)
16	REACH energy assessment tool			ICT tool
17	Methodology Training of Trainers EN	Community Center "Future Now	Methodology is developed as a result of cooperation in the youth field between experts from Bulgaria and Romania, in the framework of the project "Non-formal learning for employability"	educational material (text)
18	Energy saving tips	Energy Agency of Plovdiv	Document, developed by Sustainable energy efficiency agency witn energy saving tips for households	educational material (text)
19	Fiesta energy efficiency guide			educational material (text)
20	Fiesta Video Intelligent energy families	Fiesta project partners	Video animation developed in the framework of FIESTA project	video
22	Fiesta Video - Intelligent energy families	Fiesta project partners	Video animation developed in the framework of FIESTA project	video
22	Fiesta Video - Intelligent energy families	Fiesta project partners	Video animation developed in the framework of FIESTA project	video
23	Fiesta Video - Intelligent energy families	Fiesta project partners	Video animation developed in the framework of FIESTA project	video

2017-1-CY01-KA204-026725

24	FIESTA Tool Guidebook for Advisors	Fiesta project partners	Guidebook for energy advisors	educational material (text)
25	FIESTA tool for auditors	Fiesta project partners	FIESTA's energy tool incorporates the main energy features of a household. The formulas included in it allow for a rapid assessment of the energy performance of a building as well as of the heating and cooling appliances.	ICT tool

Table 1: Identified tools, methods and educational practices in Bulgaria

Each of these materials and tools contains useful information for the modules of the project (Technical, Social and Entrepreneurship) which could help in the development of the training packages and tools or to be used as additional literature in the preparation of the educational materials and implementing the training. Still, when adapting the IDEA educational programme, the share of practical exercises, should be increased.

After analysing the identified materials, some of them certainly stand out as very suitable for implementation in the IDEA educational programme:

- REACH Energy auditors Guidance the author of the document are the partners of REACH project. It is very relevant to IDEA project as it consists very comprehensive education materials about energy efficiency in households, energy advices, examples of energy saving equipment for households.
- REACH energy assessment tool Excel tool developed in the framework of REACH project- Very comprehensive ICT tool for assessment of energy and water consumption and calculating the energy savings. With big potential for replication.
- Energy poverty National Action Plan the authors of the document are experts from Energy agency of Plovdiv. The purpose of this document is to analyse the existing situation and to describe the planned activities needed to put the problem of energy poverty in Bulgaria at a political level. It provides very comprehensive plan, steps and recommendations for dealing with Energy poverty issue.
- Energy efficiency in households ICT tool, developed by SEEA (Sustainable energy efficiency agency). It is a simplified calculator for assessing the energy savings in households.
- CO2 emissions calculator web-based tool for calculating CO2 emissions from different energies. It could help households to assess the environmental impact of their measures. Very relevant to IDEA project with replication potential.
- Energy savings in households Platform The EnerGbg web-based platform responds to the need to share more information about How can energy be used more efficiently by households; How can energy bills be reduced; How it is possible to reduce the release of

harmful missions into the atmosphere. A lot of practical advices, interesting tools and a lot of relevant information. The EnerGbg platform allows users to share their experiences, impressions, opinions and other energy efficiency, sharing good examples, and change the behaviour and habits towards a more rational and environmentally conscious consumption of energy resources.

- Fiesta energy efficiency guide Document developed in the framework of FIESTA project. It represents an interactive document with a lot tips for energy saving in households.
- FIESTA Tool Guidebook for advisors Document developed in the framework of FIESTA project. It consist tips and information for developing an energy audit in households. Very useful information to train energy advisors. Gudance for use the ICT Fiesta tool.
- FIESTA tool for auditors FIESTA's energy tool incorporates the main energy features of a household. The formulas included in it allow for a rapid assessment of the energy performance of a building as well as of the heating and cooling appliances.

2. Relevant stakeholders in the area of energy poverty and adult education

The identification of relevant stakeholders is based on GA statement that the target users of the project outcomes would be mainly:

- institutions active in adult training,
- social organisation active in energy poverty, social services, human rights, environmental etc.

In addition, we identified other relevant stakeholders that are engaged with social activities, and that would be interested in project outcomes and through which, the final beneficiaries could be easily reached. They can be summarized as follows:

- National and local authorities
- Energy agencies and centres
- Universities
- Employment agencies and Labour offices

In the following table there could be seen the identified the relevant stakeholders:

No.	Stakeholder	No.	Stakeholder	No.	Stakeholder
1	Social Assistance Directorate	22	Association Samaritans	43	Housing Policy ["] Directorate, "Strategies and Programs" Department
2	Plovdiv Regional Social Assistance Directorate	23	Animus Association" Foundation	44	Tulip Foundation
3	Plovdiv Regional Social Assistance Directorate	24	Gender Education, Research and	45	Center fo social rehabilitation

			Technologies		
4	Employment Agency	25	Caritas	46	Association "Youth Impulse for the Future"
5	Plovdiv Labour Office	26	Trust for Social Achievement	47	"Avangard Personal Consulting" Ltd
6	National Agency for Vocational Education and Training	27	National Alliance for Volunteer Action	48	Time foundation
7	Sustainable Energy Development Agency (SEDA)	28	Youth information and consultancy centers	49	Adult Education Institute
8	Sustainable Energy Development Agency (SEDA)	29	Helping Hand Foundation	50	Time heroes
9	Sustainable Energy Development Agency (SEDA)	30	Eco mission Foundation	51	Holiday Heroes
10	Bulgarian Association of Municipal Environmental Experts	31	Za Zemiata (For the Earth)	52	Holiday Heroes
11	Association of Rhodope Municipalities	32	Institute Open Community	53	National Network for Children
12	Department "Social policy" Municipality of Plovdiv	33	Association Generations	54	Regional Labour Offices
13	Social Services Department, Faculty of Pedagogy, University of Plovdiv	34	Habitat for Humanity Bulgaria	55	Center for social support Sofia
14	Social entrepreneurship Department New Bulgarian University	35	Bulgarian Chamber of installers	56	Social services complex Vidin
15	Sofia green capital	36	Public Policy Institute	57	Social services complex Shumen
16	Public Policies Watchdog Forum Foundation - FORUM	37	Economic research institute, Bulgarian science academy	58	Protection Zone - Montana
17	Rinker Centre	38	Institute for knowledge and community	59	Center for Community Support Nadejda
18	SOFENA	39	Energy management	60	Ruvex Educational

			institute		Center
19	Sofia energy Center	40	University of Sofia - Economy department	61	KT Podkrepa
20	Black Sea Energy Research Centre	41	Institute for economy	62	Distance learning platform
21	ECIP Foundation	42	Enefect		

Table 2: Identified stakeholders in the area of energy poverty and adult education in Bulgaria

All of the identified stakeholders are important to disseminate and use the educational programme.

As it can be seen from the charts below, the analysis shows that most active in in the survey are the energy agencies and centers then follows the labor offices and research institutes. Energy agency of Plovdiv has strong contacts with the other energy agencies and centers in Bulgaria as part of ABEA (Association of Bulgarian energy agencies).

We can indicate as extremely important and very relevant to our project outcomes the following stakeholders:

- Employment Agnecy: The Employment Agency is an executive agency to the Minister of Labor and Social Policy for the implementation of the state policy on employment promotion. Ensuring employment allows full use of the capabilities and capabilities of the individual, protects her right to dignified existence and full participation in society. The strategic objectives for employment are: increasing employment and limiting unemployment increasing the economic activity and the labor potential of the population. They participate in the development and implementation of programs and measures for employment and training, aimed at designated groups of unemployed, who due to various reasons find it hard to integrate on the labour market.
- Social entrepreneurship Department New Bulgarian University: The Master Program in Social Entrepreneurship responds to the pressing and significant problems of contemporary Bulgarian society and the globalizing world in general. It is in line with the growing complexity of the social world, and that is why it is multidimensional in a disciplinary sense. The program lasts for 3 semesters. The training includes lectures on new forms of solidarity, civil society, non-governmental organizations, social problems, social economy, social capital, status and functions of social entrepreneurship, social innovation, etc. The auditorium course also includes social entrepreneurship, social exclusion and poverty, culture of entrepreneurship, sociology of prostitution and drug addiction, social realization of Bulgarian Roma, public policies and evaluation studies, etc. There are also relevant outreach theoretical areas of social entrepreneurship: internships, practices, projects and seminars.
- Social Services Department, Faculty of Pedagogy, University of Plovdiv: The Social Services Department to the University of Plovdiv prepares young professionals in the field of social service to local/regional/national authorities, NGO, charity sector. Bachelor and Master programmes include lectures on EU and national legislation and regulation, good practices in social service, taxation and funding schemes for socially vulnerable people, behavioral and social sciences, etc.

- SOFENA: non-governmental organization and non-profit legal entity. Their main objectives are To assist Sofia Municipality in developing a sustainable energy policy; To initiate, assist, and support scientific and implementation work, research programs and projects in the field of energy efficiency and new technologies; Assessment of the energy consumption and initiation of energy saving projects in the municipal, residential, industrial and office buildings. They have an experience with training programs related to energy use and could be very useful for developing IDEA tools with their expertise.
- Sofia energy Center: Sofia Energy Centre is an independent consultancy company working in the area of energy efficiency and renewable energy sources. The Centre provides services to the European Commission, international organizations, national, regional and local authorities and organizations for the development, management and implementation of energy projects and programs, market studies and assessments, training, information and promotion campaigns, energy management, policy and planning. They have an experience with training programs related to energy use and could be very useful for developing IDEA tools with their expertise.
- Public Policies Watchdog Forum Foundation FORUM: Non-governmental organisation founded by people working to achieve a more moral, transparent and stable basis for policy making in Bulgaria public policies watchdog and impact assessment; work with children and youngsters from vulnerable and marginalised groups; project preparation, management and reporting as well as the organisation and implementation of public procurement procedures and training.
- Rinker Centre: Rinker Centre is a centre for entrepreneurship and training at Bulgarian Charities Aid Foundation. The mission of Rinker Centre is to support and develop a spirit of entrepreneurship in Bulgaria. The programmes are oriented towards creating opportunities for sustainable employment, improving competitive power, adding value and innovation aiming to improve the quality of life in Bulgaria, primarily rural areas of the country. The Centre's main programmes work towards training and spreading the spirit of entrepreneurship among children and adults.
- Black Sea Energy Research Centre: Black Sea Energy Research Centre is an association of energy experts prominent in the different fields of the energy science and practice. The center works on: Development and application of models, forecasts and scenarios;Multidisciplinary research of energy consumers' behaviour; Cost-benefit (socioeconomic, environmental, etc.) analyses of policies, feasibility studies of projects, evaluation of financial sources and schemes; Networking of research, policy and market actors in the BSR countries;Training and dissemination of energy-related information. They have an experience with training programs for municipalities and could be very useful for dissemination the IDEA outcomes with their contacts databases.
- Association Samaritan: The mission of the Samaritans Association is to work for the full inclusion of children, young people, adults and families in an unequal position on the territory of the municipality of Stara Zagora, supporting individuals, groups and communities through the implementation of activities and provision of services are based on real needs; Assist and build ability to develop self-help skills in different situations.support the

integration process and promote personal development; promote or restore social functions; provide help to prevent consequences.

- CARITAS: Caritas Bulgaria is a Bulgarian non-profit organization implementing social work to support vulnerable people in society. Established in 1993 by decision of the Bishops' Conference of the Catholic Church in Bulgaria, Caritas Bulgaria is a federation of Diocesan Catholic organizations. Help the people in need through our network of member organizations and their local structures. Caritas places in the core of its focus people from the "global periphery" who live in poverty and suffering and who need care and support so that they can have a life of dignity. As a result, Caritas Bulgaria supports its member organizations in carrying out social activities through their local structures. Provide information to the network with a view of increasing the effectiveness of the social work. Encourage the dialogue, cooperation, coordination and exchange of experience among the organizations of the network.
- Trust for Social Achievement: Trust for Social Achievement is a nonprofit organization. Their mission is to break the poverty cycle by promoting opportunities that help Bulgaria's most disadvantaged citizens achieve educational and economic success. They support programs that, with integrity, scalability, and transparency, boost the long- term achievement of Bulgaria's poorest, with a focus on the Roma, who comprise a large segment of the poor. This is achieved by supporting three key areas: Early childhood development, with an emphasis on healthy parenting and increased participation in preschool. Educational achievement and drop-out prevention for at-risk pupils, with a focus on improving school participation/learning and increasing graduation from high school. Access to income opportunities for at-risk groups, specifically job connection, entrepreneurship, and home ownership. In addition they are interested in capacity building for local organizations, with an emphasis on financial accountability and data-based performance evaluation.
- Helping Hand Foundation: The vision of The Helping Hand Foundation is that more children in Bulgaria should grow in a loving environment, embraced the way they are and supported by both their families and society. Their mission is to take part in the struggle against two of the worst problems around the world: poverty and illiteracy. They support children and families who struggle for survival every day, focusing our efforts on the improvement of the opportunities for education and personal development of the children, so that they will be able to deal with the challenges of their future life as adults.
- Eco mission Foundation: The "Ecomission 21st Century" Public Benefit Society brings together citizens and young people in the town of Lovech who work for the sustainable development of the communities in the region for prudent management of the environment and natural resources. Performs an effective dialogue with institutions and the public to build a new value system and environmental behavior, enhancing the effectiveness of environmental and civic education and awareness among young people. Through its activities, it helps to promote the principles of sustainable development and civil society and creates conditions for the development of young people in the Lovech region.
- Za Zemiata (For the Earth) : Za Zemiata (For the Earth) is a Bulgarian enregistered in 1995 and determined to work for sustainable life on our planet and combat exploitation of people

and nature. Za Zemiata strives for an outward-oriented policy and activities are carried out in co-operation with volunteers and other Bulgarian NGOs. Za Zemiata is the representative organisation of the Central - and Eastern European Bankwatch network and of the International Energy Brigades, and a member of GAIA and SEEEN (South Eastern Europe Environmental NGO) networks. Za Zemiata is committed to: **Suggesting and developing positive and sustainable alternatives to socially and environmentally harmful activities and projects; Actively involving in civil society building and raising awareness among the grassroots about existing environmental problems and ways to counteract;** Networking and co-operation between local and international non-governmental groups.

- Association Generations: Association Generations is an association of experts working for many years in education and adult learning, with extensive experience in project management of EU programs like Leonardo da Vinci, Grundtvig, other like Phare or some funded by the Social funds. The desire of the founders of the association is to follow the common European idea of Lifelong Learning.
- Habitat for Humanity Bulgaria: Habitat for Humanity is licensed in Bulgaria as the Podlson Za Chovechestvoto Foundation. As the local Habitat for Humanity affiliate, they strive to eliminate poverty housing in Bulgaria and to make adequate housing a matter of conscience and action. They work with low-income families from all walks of life to support them in their pursuit of decent and affordable homes. They provide affordable loans with long repayment periods to those in need of proper shelter. We build and/or renovate houses in partnership with the people in need and other civil, government, and business organizations.
- Public Policy Institute: The Institute has the status of a private, non-governmental foundation. The Institute for Public Policy conducts research and analysis on the different spheres of social, economic and cultural life in which public policy is essential to achieve the objectives of civil society. In performing these analyzes rely both on its own expertise and the contribution of external and independent experts, civil society organizations and institutions.
- Tulip Foundation: Raise funds for social investment from individual donors, the business sector and public and private sources. Provide financial and technical support to civil society organisations addressing social needs of the community at a national level. Contribute to the effectiveness, sustainability and diversity of social programmes in Bulgaria by making targeted grants. Serve as a professional vehicle and provide expert advice, consultancy, assessment, monitoring and evaluation of projects and programmes. Promote transparency, accountability and professionalism to comply with the highest ethical standards. Work in partnership with other civil organisations at national or local level for greater social responsibility and sustainability of the civil sector in Bulgaria.
- Holiday Heroes: Holiday Heroes is a non-profit association for public benefit, registered in the Central Registry with the Ministry of Justice. The aim of the association is to support the socially disadvantaged, the disabled, and families in need, as well as to encourage charity and organize campaigns at national and Christian holidays.

- IDEA
 - Center for social support Sofia: Institute of Social Activities and Practices specializes in the development of research, training, and professional support for professionals in helping professions.
 - Distance learning platform Building Institutional Capacity of the Ministry of Labor and Social Policy

3. Training needs assessment in the area of energy poverty

Training needs assessment was carried out with a web-based questionnaire. Purpose of the questionnaire was to collect information from different stakeholders on their current existing understanding of and involvement in the are of energy poverty. Inputs were collected anonymously.

Questionnaire was filled in by 35 respondents.

> Respondents of the questionnaire by their representation

20% are representatives of public authority 22,9 % are representative of energy agencies 8,6 are representative of job centre 11,4 are citizens civil society organization 11,4 % are representative of research institution other: please specify

Figure 3.1: Respondents of the questionnaire by their representation

Представител съм на

34 responses



3.1 Understanding of energy poverty and involvement in the topic

- Respondents' familiarity with the problem of energy poverty
- 31,4% have indicated that "I have heard the term, but am unfamiliar with it"
- 11,4% have indicated that "I know a bit about the problem"

54,3 % have indicated that "I am familiar with the problem."



Respondents dealing with the energy poverty at their work

Is topic of energy poverty something that you meet at your work? (choose one answer)

8,6 % have indicated that "in my work so far I have not met with the topic"
48,6% have indicated that "in my work I rarely come across the topic"
25,7% have indicated that "In my work I often deal with the topic"
8,6% have indicated that "in my work I am regularly dealing with the topic"

Figure 3.4: Respondents dealing with the energy poverty at their work

2b. Срещате ли темата за енергийната бедност във вашата работа? 🛛 📋

35 отговора



- Respondents that are dealing with the topic of energy poverty in their work, are facing it in various kind of ways:
- Research
- I work on different projects
- Evaluation of problems in energy-efficient renovation of dwellings, problems with air quality, etc.
- Expert on Bulgaria's Energy Strategy Project in the Action VII Social Dimensions of Electricity Sector Measuring Energy Poverty and Analysis of Long-Term Intervention Measures

- European projects in this area
- Of interest and professional
- With research and policy recommendations
- conducting scientific research
- Research; teaching
- Development of policies and financial incentives for energy efficiency
- With reports and analyses on the subject and recommendations made to the government and the local government
- Analysis of the different definitions of energy poverty, the normative and regulatory instruments for impact on it, its manifestation in Bulgaria and other EU countries, methodological proposals for calculating its scope and depth in Bulgaria
- Our core business is energy efficiency, and it is the most sustainable solution to the problem of energy poverty.
- Most of all in terms of promoting energy renovation of residential buildings, social housing, but also in the context of policies and measures related to air cleanliness, climate change and adaptation to them.
- Analysis of empirical information
- We run educational programs, give recommendations and advice on the efficient use of energy
- I am activist about improving the air in Sofia and I am concerned about the problem. I understand the challenges and find airborne problems for predominantly social. In this sense, this is related to energy poverty.
- Part of energy policy
- We provide training for energy efficiency of the homes for families, who are beneficiaries of our programs for improving the living conditions
- I do not deal
- We perform RES campaigns
- Especially through projects related to energy efficiency and use of RES.Никакъв
- A large proportion of unemployed persons re-registered in the Labor Offices receive energy benefits. We work together with the Social Assistance Directorate to identify the energy poor.
- Our service users complain about this problem
- Training, improving the qualification of unemployed
- we serve such people, from the mentioned families.
 - Relevancy of energy poverty for respondents' work

18 Participants or 51,4% say that energy poverty is relevant to their works. 6 participants or 17,1 % say that the topic of energy poverty is very related to their work and 11,4% say that the topic is very irrelevant to their work.

Figure 3.5: Relevancy of energy poverty for respondents' work

2d. Is the topic of energy poverty relevant to your field of work? *1-very irrelevant, 2-irrelevant, 3-somewhat relevant, 4-relevant, 5-very relevant*

2d. Свързана ли е темата за енергийната бедност с вашата работа. Моля, отговорете с от 1 до 5 (1 - Няма нищо общо 2 - Няма отношение; 3 - в дадени отношения; 4 - свързана е; 5 - има много общо)





Importance of the issue of energy poverty for respondents

16 participants or 45,7% say that the issue of energy poverty is very important. 1 participant has indicated that in his opinion the issue of energy poverty is not relevant.

Figure 3.6: Importance of the issue of energy poverty for respondents

What importance would you generally give to the issue of energy poverty? 1-very irrelevant, 2-irrelevant, 3-somewhat relevant, 4-relevant, 5-very relevant

2f. Как оценявате, като цяло, значимостта на проблема Енергийна бедност? Моля отговорете с от 1 до 5 (1 - изобщо не е важен, 2- не е толкова важен, 3 - може да се каже че е от значение, 4 - важен е, 5 от изключително значение е)

35 отговора



3.2 Stakeholders' needs in the are of energy poverty

 Categories related to energy poverty where respondents would need more knowledge or external support In which categories related to energy poverty would you need more knowledge or external support? (*rate the answers from 1 to 5 (1-very unimportant, 2-unimportant, 3-somewhat important, 4-important, 5-very important*)

Options:	Number	%
Energy efficiency and related measures	17	48.6
Issue of energy poverty (causes, problems, solutions, problem identification)	18	51.4
Indicators of energy poverty and their monitoring	19	54.3
Social aspects of working with socially disadvantaged households	14	40
Communication skills	4	11.4
Policies and measures	24	68.6
Cooperation with different stakeholders and cross-sectoral integration	20	57.1
Not applicable	2	5.7

Figure 3.7: Categories related to energy poverty where respondents would need more knowledge or external support (graph/figure – answer 3a)



Most suitable tools for respondents' involvement in energy poverty

The number of participants indicated the different categoris for most suitable tools for respondents' involvement in energy poverty are shown below:

Options:	1	2	3	4	5	Average
Educational		4	9	10		3,26

seminars				
Workshops	2	9	15	3,50
Educational	-	-	10	0,00
material as text	4	12	15	3,35
documents	•	12	10	0)00
Online platform				
with				
information on				
energy poverty	2	4	9	3,47
(measures,				,
relevant				
actors,)				
Set of statistics				
on relevant	4	4	6	2 4 4
indicators of	4	4	6	3,14
energy poverty				
Database of				
relevant	2	9	12	3,43
stakeholders				
Questionnaire				
and tool for	3	8	13	3,42
energy audits in	5	0	15	5,42
households				
Database on				
energy poverty				
in households		6	9	3,60
(on		0	,	3,00
country/regional				
level)				
Video	2	8	9	3,37

Figure 3.8: Most suitable tools for respondents' involvement in energy poverty



- Respondents have also mentioned some other tools and content that they see as useful for their work: (answers on 3c)
- Comparative analyses with other countries where there are measurable indicators other than Eurostat and the living conditions survey. We do not know what the energy characteristics of buildings in Bulgaria are. Very interesting data would be at the building level as the government is currently trying to launch a measure to protect vulnerable consumers by giving priority to rehabilitation buildings with more than 30% energy poor living - it would be interesting to do a similar study building, and how much such a policy at the building level is at all applicable. I think training for energy poverty should affect people in institutions responsible for energy services and energy efficiency in the Household sector, not so many universities and scientific organizations.
- Developing policies against energy poverty and their implementation
- Combination of various possible financial sources to support and stimulate energy poor citizens to undertake energy renovation of the dwellings, as well as replacement of fuel system / heating appliances, RES installation.
- working with social services that have direct contact with households
- Sample projects with external access

3.3 Households' needs in the are of energy poverty

Options:	1	2	3	4	5	Average
Awareness raising			10	6		3,38
Education and information sharing		1	9	8		3,39
Energy advising and auditing		1	2	13		3,75
Training about measures they can implement themselves			8	14		3,64
Implementation of structural measures			4	13		3,76
Practical measures for reducing energy and water use		1	4	8		3,54
Informations about energy and social actors that could help them		1	8	12		3,52

Respondents' input on beneficial content for energy poor households

Figure 3.9: Respondents' input on beneficial content for energy poor households



- Respondents have also mentioned some other content that they see as beneficial for energy poor households: (answer 4b).
- First, I do not understand what structural measures mean, and what are the practical measures for savings it would be good to give short examples. Structural rehabilitation? Practical the use of saving devices? Overall, the measures are technical and behavioural. Information campaigns and awareness are behavioural. The effect is smaller than the technical ones. The technical measures are accurately measured, have a measurable effect, and I do not need to appreciate them. The purely awareness-raising measures are predominant in the list above and have a lesser impact than the technical ones for which an investment is required.
- Objective real-time energy consumption in households to identify the largest appliance consumers and time ranges so as to make a comprehensive profile of household energy consumption, including to investigate the difference in behaviour of individual households and its impact on energy consumption.
- Accepting that energy poor citizens usually have other health, financial, housing, etc. problems at the local level to provide comprehensive comprehensive care and advice on the example of English initiatives such as Seasonal Health Intervention Networks (SHINE), Green Doctors, and Affordable Warmth Access Referral Mechanism (AWARM).
- interest-free loans for 0-energy buildings
- Financial instruments

3.4 Form of educational materials and tools on the topic of energy poverty

Appropriateness of approaches and tools for education about energy poverty and measures for alleviating energy poverty Which approaches and tools are most appropriate for education about energy poverty and measures for alleviating energy poverty? (*rate the answers from 1 to 5 (1-very unimportant, 2-unimportant, 3-somewhat important, 4-important, 5-very important*)

Options:	1	2	3	4	5	Average
Lectures	2	5	13	7	4	3,19
Textbooks	3	9	8	9	1	2,87
ICT tools	2	3	10	7	10	3,63
Games	7	5	6	7	6	3,00
Web based tools	2	2	9	5	15	3,88
Role playing	7	4	10	5	4	2,83
Practical activities			1	6	26	4,76

Figure 3.10: Respondents' input on appropriateness of approaches and tools for education about energy poverty and measured for alleviating energy poverty



- Respondents have also mentioned some other approaches and tools that they see as appropriate for education about energy poverty and measures for alleviating energy poverty: (answer 5b). Majority of respondents think that educational tools should/should not include the possibility of contributing new ideas, notifying the authors about shortcomings and bugs, and proposing solutions for improvement of the tool:
- Adequate citizens' initiatives and pressure on the government
- no
- Talks and advice in an informal environment such as Energy Cafe (SELECE)
- direct consultation, web-based tools are not always appropriate as these households usually do not have a computer or a smart background
- Directly assessing the possibilities for improvement simulation with a particular house, for example, and how it could be adapted to more mild heating methods.

- Participation in voluntary mutual assistance networks (Habitat type)
- Raising awareness and developing a media campaign; information on projects of various organizations related to energy poverty.
- consultation with the energy poor themselves and with social assistance employees

≻ Why?

- Due to the dynamics of problems
- Of course, I even think that these tools should be tested by representatives of the target groups before being put into mass use. They should be updated at least once a year to reflect the market situation. Each country has typical poor characteristics due to different climate, building condition, and income. The structure of households is different all this leads to different ranges of measures. Some tips may be useless, inappropriate, others may come as suggestions by the poor themselves in contact with them. It is important, however, that trained experts in ministries, organizations, etc. to have real contact with the poor otherwise nothing makes sense.
- to have feedback
- Improvements are always good
- help to improve quality and are a means of feedback between countries in the learning process
- always the feedback is beneficial
- There are no ideal applications and a mechanism to improve them.
- Because the subject is under-researched. Among other things, there is no commonly accepted definition of "energy poverty", and there are misunderstandings.
- In order to improve the learning materials. Adaptation of materials to the local context may result in inaccuracies. After testing the proposed approaches and methods, it is advisable to correct the omissions that are being settled.
- These are new tools. They will not get right away.
- things are changing rapidly
- environment and technology are in continuous development
- Every knowledge is penultimate and there are many new developments every day
- The processes are very dynamic and the update is imperative at all times. The same applies to new ideas in this area. Always indicate gossips and downsides to get a good product.
- There may always be a mistake and there may always be a better idea and a better option
- Feedback is important.
- Everyday life requires permanent changes that need to be taken into account, so that tools need to be useful, need to be updated to the needs of consumers.
- Namely, because of the tool improvement!

3.5 Content of educational materials and tools on the topic of energy poverty

Respondents' input on importance of topics for education about energy poverty and measures for alleviating energy poverty Which topics do you see as important for education about energy poverty and measures for alleviating energy poverty? (*rate the answers from 1 to 5 (1-very unimportant, 2-unimportant, 3-somewhat important, 4-important, 5-very important*)

Options:	1	2	3	4	5	Average
Detecting energy poverty (definition, indicators, causes, solutions)		1	5	8		3,50
Climate change and other environmental impacts of energy use		2	7	15		3,54
Basics about energy and energy needs		1	8	10		3,47
Heat Energy, Electric Energy and Water			7	11		3,61
Renewable energy sources			10	12		3,55
Energy use of domestic devices and appliances			3	9		3,75
Soft and infrastructural measures and devices for reducing energy and water consumption		1	5	11		3,59
Communication training (communicating with costumers, households members and other stakeholders)		2	7	14		3,52
Methodology of energy advising in households (process of implementation of energy advising, how to use questionnaire and software tool, saving devices)		2	6	14		3,55
Practical training (ho to implement energy advising in households, measuring energy and water use, replacement of devices in household, identification of key problems in household)		1	4	10		3,60
Social security aspect and related services (to be able to identify problem and give advice to household		1	3	15		3,74
Informations about energy and social actors that can help energy poor household		2	3	13		3,61
Entrepreneurship (job application, how to start your own business initiative, marketing, etc.)		5	6	8		3,16



Respondents have also mentioned some other content that they see as appropriate for education about energy poverty and measures for alleviating energy poverty:

- Road maps or scenarios for meeting energy poverty and achieve energy independency
- > Respondents' input on importance of different types of modules for education about energy poverty

Option	1	2	3	4	5	6	Average
Theoretical part on energy and reducing energy and water use		2	10	6	10		3,86
Issue of energy poverty		5	3	9	8		3,80
Practical part: energy advising, implementing measures, saving devices, household visits		1	1	3	6		4,27
Communication part		5	3	7	8		3,78
Social part		3	7	5	10		3,88
Entrepreneurship par		6	8	3	5		3,32

Please indicate the type of training sets that you think are the most important (*prioritize your selection from 1-most important to 6-least important*)



Figure 3.12: Respondents' input on importance of different types of modules for education about energy poverty

The most important conclusions from the surveys could be summarized as follows: More than 50% of the respondents are familiar with the issue of energy poverty. 48,6% of the participants have indicated that in their work they rarely come across the topic of energy poverty. 45,7% think that the issue of energy poverty is very important. The most suitable tools for respondents' involvement in energy poverty is database on energy poverty in households. Most of the respondents are interested in implementation of structural measures and energy advising and auditing approaches. The biggest share of respondent have indicated that they need more knowledge and external

support in "policies and measures" and in cooperation with different stakeholders. The topics, that are indicated as most important for education about energy poverty are: "Social security aspect and related services (to be able to identify problem and give advice to household" and "Energy use of domestic devices and appliances." Most of the respondents find the Practical part (energy advising, implementing measures, saving devices) as most important training sets for modules.

4. Country specifics on energy poverty

In Bulgaria there is no still a clear definition for Energy poverty. It could be said that a household is considered to be energy poor if it has difficulty meeting its main energy needs. Energy-poor households spend a disproportionately large part of their income on energy - more than 10% to meet their energy needs. Another definition that is commonly used in the EU is: a household that spends twice as much energy over the median energy costs nationwide.

Energy poverty can be caused by the interaction of various factors:

- low income that is related to poverty as a whole
- high energy prices, including the use of relatively expensive energy sources (eg electricity)
- poor energy efficiency of the home lack of insulation, old and inefficient heating systems.

In Bulgaria an energy poor household is considered a household that meets the criteria for receiving social benefits for heating.

How do people identify in energy poverty?

Indicators for potentially energy poor households:

- low income;
- difficulties in paying energy bills;
- old dwellings that have not been repaired;
- Insufficient heating level due to lack of heating, lack of insulation or inefficient heating system;
- Traces of moisture or mold that reflect the poor condition of the building and / or lack of heating;

There are some existing programs and project on energy poverty in Bulgaria:

REACH project - The aim of REACH was to contribute to energy poverty abatement at practical and structural level. With this project we wanted to empower energy poor households to take actions to save energy and change their habits, and to establish energy poverty as an issue that demands structural solutions at local, national and EU level.

The strategic objectives of the action were:

- to make available approaches for energy poverty abatement that are applicable to other regions in order to launch similar action in other countries,
- to sustain local actions in the pilot regions on a long run and spread it to other interested localities and countries by continued training of energy advisors in schools, continued implementation of visits, and promoting the action to variety of actors across the EU,
- to ensure that energy poverty receives structural solutions on local, national or EU level.

http://reach-energy.eu

Financial instruments for the improvement of energy efficiency in Bulgaria

NATIONAL ENERGY EFFICIENCY PROGRAM OF MULTI-FAMILY RESIDENTIAL BUILDINGS - Existing financial mechanism is the "National Energy Efficiency Program for Multifamily Residential Buildings", which grants 100% grant to eligible buildings up to the minimum energy class "C". This program finances measures for the realization of energy-efficient technologies in multifamily residential buildings built by industrial means - large-scale residential construction and large-format shuttering. The program provides financial support not only for the implementation of energy saving measures, but also for additional construction activities, technical design and energy audit of the building, author's and construction supervision, as well as the costs related to obtaining the necessary permits.

For more information: http://mrrb.government.bg/

LOAN ENERGY EFFICIENCY CREDIT PROGRAM - One of the most successful credit lines for improving energy efficiency in households and multifamily buildings in Bulgaria is REECL (the Home Energy Efficiency Credit Program). The REECL program provides households or associations of homeowners across the country with the opportunity to take advantage of energy efficiency and to obtain targeted credits and grants through the network of Bulgarian commercial banks. The credit line funds up to 20% for various energy saving measures. Between September 2006 and September 2014, over 50,000 loans were disbursed for a total amount of \notin 27.7 million. Among the most common energy saving measures is the purchase of energy-saving joinery for which over 22,700 credits were granted, followed by the purchase of air conditioning and insulation. It is expected in September 2015 to open the program again.

For more information about the program: http://www.reecl.org/

TARGET ASSISTANCE FOR HEATING

Targeted heating assistance, administered by the Ministry of Labor and Social Policy, is the only existing program providing direct support to vulnerable households. The program provides financial support to cover bills for district heating, electricity, coal, wood and natural gas. All households with incomes over the last 6 months, less than the differentiated minimum income, are eligible for heating aid. In order to receive the assistance, the applicant household must meet additional conditions, not to sell real estate for the past 5 years and not to have cross-border travel at their own expense in the last 12 months. The amount of social assistance is based on the monetary equivalent of 450 kWh of electricity, such as 300 kWh daily tariff and 150 kWh night at electricity prices at the beginning of the heating season. The aid is granted for a period of 5 months, from 1 November to 31 March. Targeted heating assistance is currently under the jurisdiction of the Ministry of Labor and Social Policy, which has a wide network of helpdesks and maintains a database of vulnerable consumers. In 2013, 251 876 households were assisted, each receiving a total of BGN 328.60 for the entire heating season.

Government social support

Monthly allowances are granted to people with permanently low incomes and / or disabilities. They can be divided into the following groups: differentiated minimum income, child allowance, monthly child-care allowance up to 1 year old, monthly supplement for children with permanent disabilities, integration. These are the types of assistance that cover more Bulgarian citizens and make more significant payments for them. The rest are insignificant both as the number of recipients and as funds.

Target assistance for heating

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Some municipalities have started or will start funding programs for supporting measures for renovation of heating systems in households:

Sofia City Council approved soon the implementation of a pilot project "**Improving the air quality in the residential heating sector by replacing individual domestic solid fuel firing appliances**". It provides for free delivery and installation of 30 pellet stoves for single-family residential buildings and provision of the necessary quantity of pellets for one heating season.