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iDEA Country Specific Report

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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 area 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.

At the first part of the document, we present the tools and stakeholders identified in Cyprus. The tools presented can be useful in the procedure of developing this project's specific tools. Their features and functionalities could be analysed and reinforced, as to design the new tools. Stakeholders can be valuable providing their advices, tips and help throughout the duration of the project.

At the second part of this document, we present the results of the survey we conducted, by having questionnaires sent and filled in by stakeholders in Cyprus. The results are displayed in graphs.

Contents

Introduction

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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

No.	Name of the tool	Author/Institution	Short description of the tool	Format of the tool
1	Social Electricity[1]	NetRL, Computer Science Department, University of Cyprus.	First a user has to register and connect (free). The user can then compare his latest month consumption with the one he had in past year or months, he can set up targets for energy saving, he can analyse his consumption based on the electrical appliances on his house and gain a better understanding of his consumption through examples. He can see several comparisons of his own consumption or of his own savings with other citizens or with his Facebook friends, he can enter a competition for the highest energy saving, he can see the areas with the higher and lowest consumption in Cyprus as well as consumption details for all of the areas. Also he can find there educational material like tips for better use of appliances, videos about energy, electricity, smart grids etc, and webinars. Finally he can find a games console where he can play four educational games such as a timed energy savings	ICT tool

			related quiz.	
2	Local Energy Balances [2]	Cyprus Energy Agency	User chooses a village/town/area. He is presented with a graph showing the energy balances for several types of energy (e.g. Electricity, Heating Diesel, Kerosene etc) with the respective percentage for each energy type, a graph showing the type of usage (e.g. Residential, Transports etc), and a detailed table showing the correlation of the first and the second graphs in numbers.	ICT tool
3	ENERFUND [2]	Led by the Cyprus University of Technology (CUT) and consortium from 12 countries	ENERgy Retrofit FUNDing rating tool: it is a tool that will rate and score deep renovation opportunities. The tool will be based on a set of parameters such as EPC data, number of certified installers, governmental schemes running, etc. By providing a rating for deep renovation opportunities – whether for private establishments or for public buildings – funding institutes can provide targeted loans, retrofit companies can identify sound opportunities, municipalities can promote targeted incentives and the public's trust for retrofitting will be enhanced. User can select one of the four countries, and he is presented with the map. Houses are presented with scaling colors depending on the parameters. Also the user can filter the presented houses via some parameters: energy rating, potential energy rating and construction area. Finally the user can view some information about the country and the ease of doing several things there such as "Ease of getting electricity"	ICT tool

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

All the above described tools could be useful and important for the development of the IDEA tools. Each of them has important functionality that could be introduced in the IDEA tools, while the tools can be also reinforced with additional features specifically designed for the purposes of this project. In this way, the tools could be of real value to all the stakeholders in the energy field.

Displaying and monitoring the user's consumption month by month, and comparing the different values to see if he has decreased his consumption or not, could help him understand his mistakes and motivate him to try his best to reduce energy.

Also analysing the consumption based on the electrical appliances of a house will help households gain a better understanding of their consumption and basic knowledge on the subject of energy consumption.

Features such as social comparisons, graphs and maps displaying, educational material and tips provision could be embedded in the tools that will be implemented on this project.

Educational games are a good way to provide basic knowledge to people in a fun and simple way.

Furthermore, mapping the real data about households in need and rating them regarding their current needs in an interactive way could constitute a very helpful tool for energy agencies and energy consultants.

In each one of the above tools, various gaps in functionality, offered services and provided information can be found, that need to be filled by this project's tools. The most important is that the tools must be specified for the partner's countries data, and for the current needs of the energy offices.

Energy agencies are in need of tools to easily and efficiently save all the data recorded from households visits, analyse them by using the same tools and extract results by combining them in several ways.

The maps and graphs need to get upgraded, to present relevant and important information, hiding any personal or sensitive data. If tools like the aforementioned are implemented, they could definitely be of real value to the efforts against energy poverty.

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

No.	Stakeholder	No.	Stakeholder	No.	Stakeholder
1	Cyprus Energy Agency	2	Sustainable Energy Laboratory - Cyprus University of Technology	3	Department of Environmental Science and Technology - Cyprus University of Technology
4	Energy Committee, Aglantzia Municipality	5	Commissioner for the Environment Bureau	6	Nicosia Municipality
7	Electricity Authority of Cyprus	8	Energy Service - Ministry of Energy, Commerce, Industry and Tourism	9	Team for the energy efficiency of buildings - Energy Service - Ministry of Energy, Commerce, Industry and Tourism
10	Cyprus Energy Regulatory Authority	11	Photovoltaic Technology Laboratory - University of Cyprus	12	Environment Department - Ministry of Agriculture Natural Resources and Environment
13	Youth Board of Cyprus	14	Cyprus Cooperative Bank - Energy Loan	15	Human Resources Development Authority
16	Architectural Department - University of Cyprus	17	Energy & Environment Service - Employers and Industry Federation	18	Open University of Cyprus - Studies for the Environment
19	The Cyprus Institute - The Energy, Environment & Water Research Centre	20	Cyprus Scientific and Technical Chamber (ETEK)		

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

There are different categories of stakeholders listed in the above database. Most of them are energy related, one way or another, but there are also a few related to giving opportunities to unemployed people, and a few others related to helping socially disadvantage households. Also there are stakeholders related to protecting the environment.

All of them are important and relevant for the project, as our objectives include the reduction of energy poverty through educating the affected households –but also through connecting them with the proper authorities than can help them financially directly or indirectly- , training unemployed people to become the trainers thus giving them new job opportunities, and also contribute on preserving of the environment.

Each of those organisations has the capacity to assist the consortium in achieving the projects purposes in their field of occupation. They can provide us with useful advice and tips regarding energy consumption reduction, and also information about who is the appropriate carrier to financially or socially help the households in need.

Furthermore, it is of major importance that they indicate to us what tools they need in order to monitor energy poverty, make all the necessary calculations, educate the affected people, make them understand and help them face and solve this problem. In that way, the IDEA tools will be implemented so us to provide the most appropriate and useful functionalities, as well as be useful and have sustainability.

All of them can participate in dissemination activities, seminars and other events in Cyprus throughout the duration of the project.

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 area of energy poverty. Inputs were collected anonymously.

Questionnaire was filled in by 39 respondents.

Figure 3.1: Respondents of the questionnaire by their representation

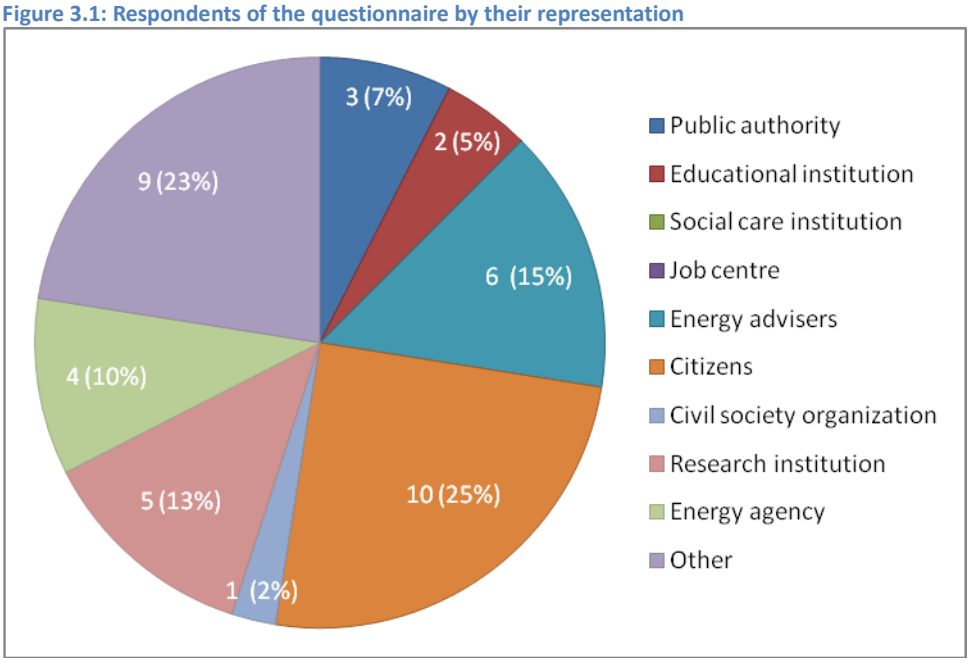
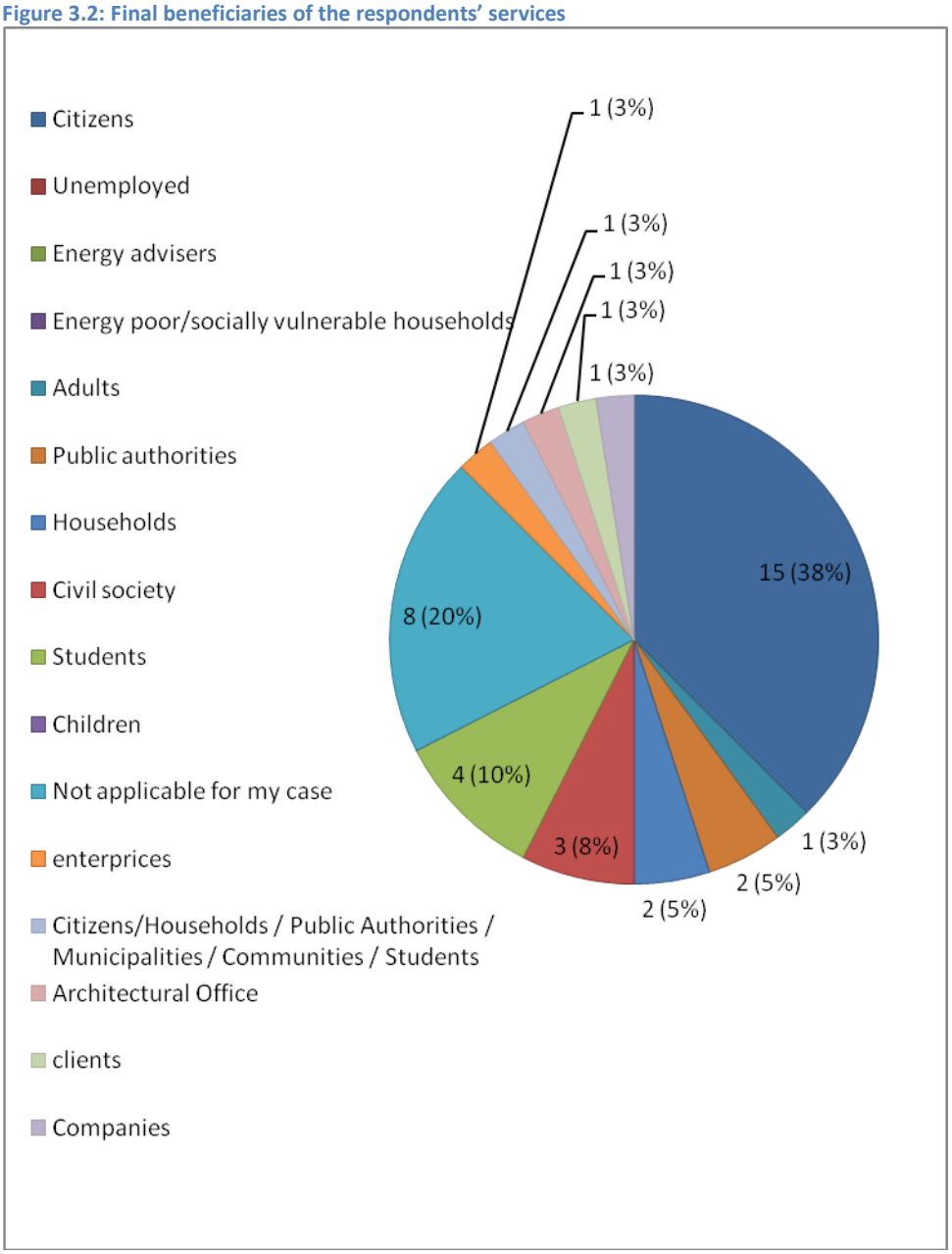


Figure 3.2: Final beneficiaries of the respondents' services



3.1 Understanding of energy poverty and involvement in the topic

Figure 3.3: Respondents' familiarity with the problem of energy poverty

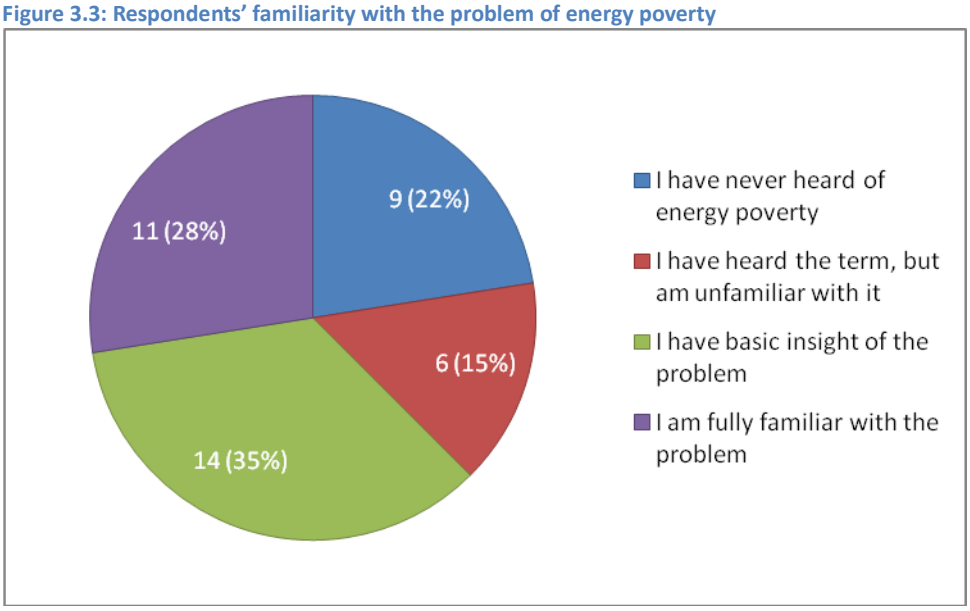
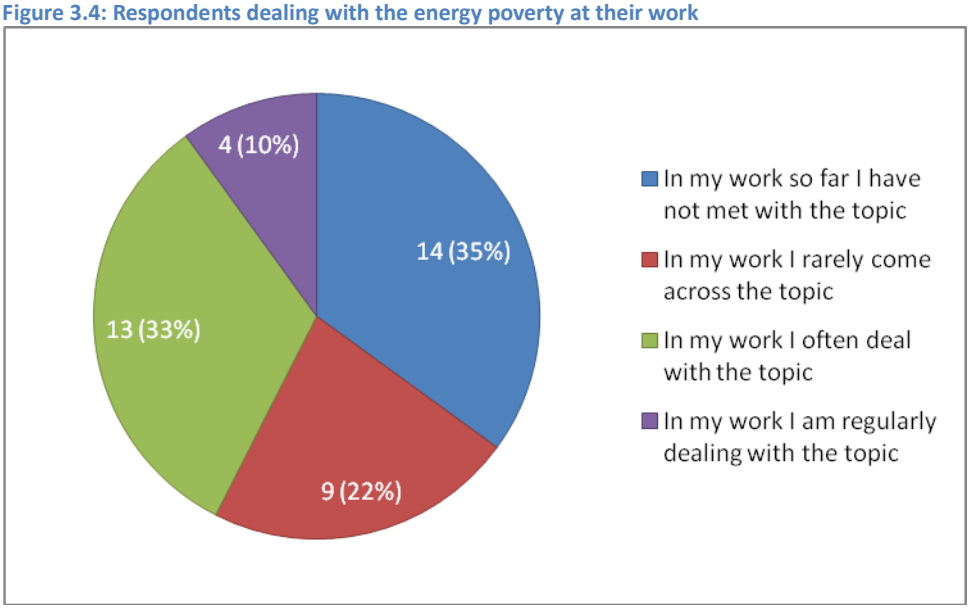


Figure 3.4: Respondents dealing with the energy poverty at their work



Respondents that are dealing with the topic of energy poverty in their work are facing it in various kinds of ways (as stated by them):

Energy policy analyses, which I conduct, may sometimes involve energy poverty considerations
support schemes recommendations
A lot of people are asking for advice from our agency in order to overcome this problem - Especially from households with low income where the expenses for heating are significant.
This topic is not relevant to our field of work.
it is a research topic for my pHs
informing civilians for grants available for groups of people in the categories of vulnerable consumers.
through the news
I am not dealing with it
My job is about the energy efficiency of buildings. Improvement of energy efficiency of households consists one of the mediums to stop energy poverty.
By giving lectures in cofounded programmes.Μέσω διαλέξεων σε συγχρηματοδοτούμενα προγράμματα
Some projects dealt with energy renovation of energy poor households
Because of European projects that are dealing with energy saving and through the constant communication with people through informative meetings and events.
Researching/Theoretically - Development of legislation
Energy poor people can get special prices for electricity and can get fundings for photovoltaic panels installations and energy renovations of their homes.
Search for the proper one based on needs and budget and not based on requirements
house insulations
designing houses for poor households
Architecture
Giving advises for building solutions of low cost.
Provide funding to vulnerable citizens for investments that will bring reduction to their energy needs.
We don't deal with this issue
Design bioclimatic houses- Use of environmental sources and natural elements=give equal and good living conditions in energy efficient houses. Reduction of non natural energy usage for heating and cooling.
With trying to preserve energy and design buildings with proper orientation and installation of photovoltaic panels.
I don't deal with this issue
I don't deal with this issue
Include in the electrical installation of buildings for energy usage reduction, photovoltaic panels, energy saving lamps, etc.
ARCHITECTURAL STUDIES
None at all
We have not deal with this issue so far

Figure 3.5: Relevancy of energy poverty for respondents' work

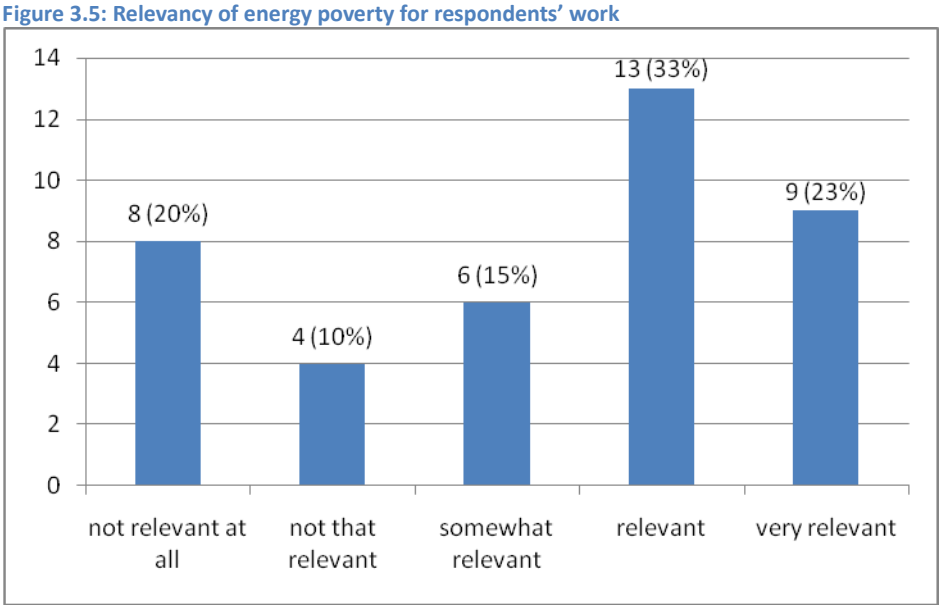
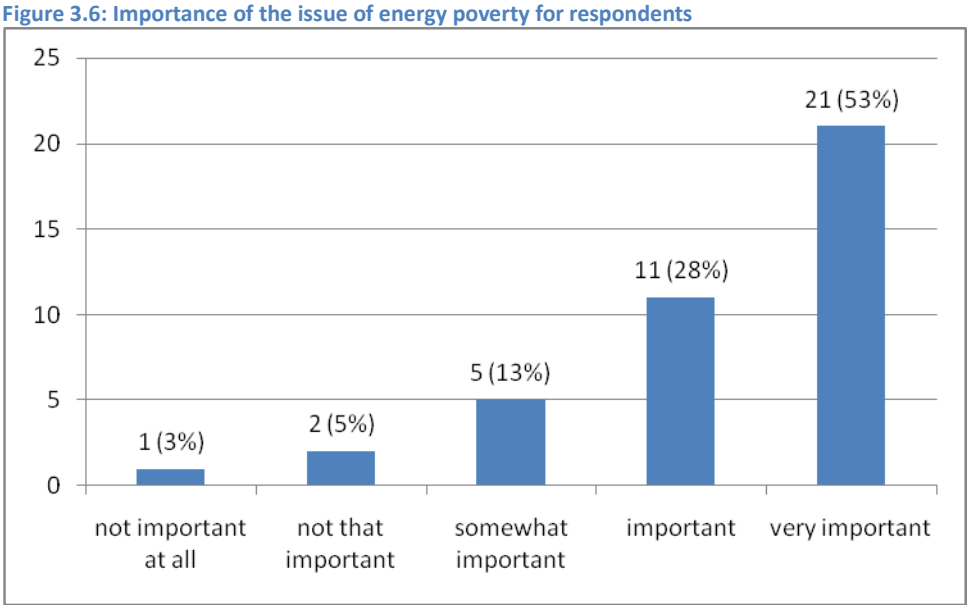


Figure 3.6: Importance of the issue of energy poverty for respondents



3.2 Stakeholders' needs in the area of energy poverty

Figure 3.7: Categories related to energy poverty where respondents would need more knowledge or external support

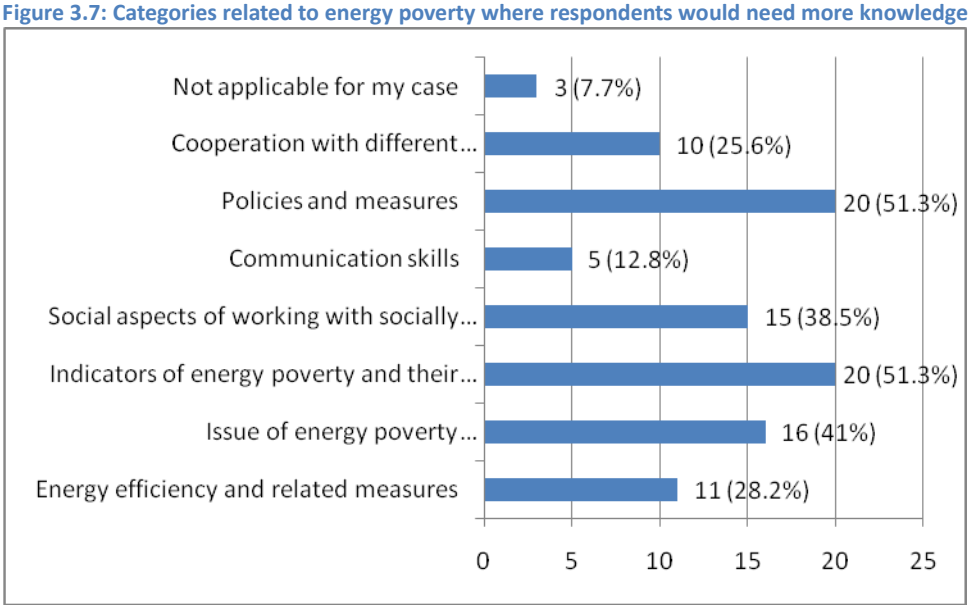
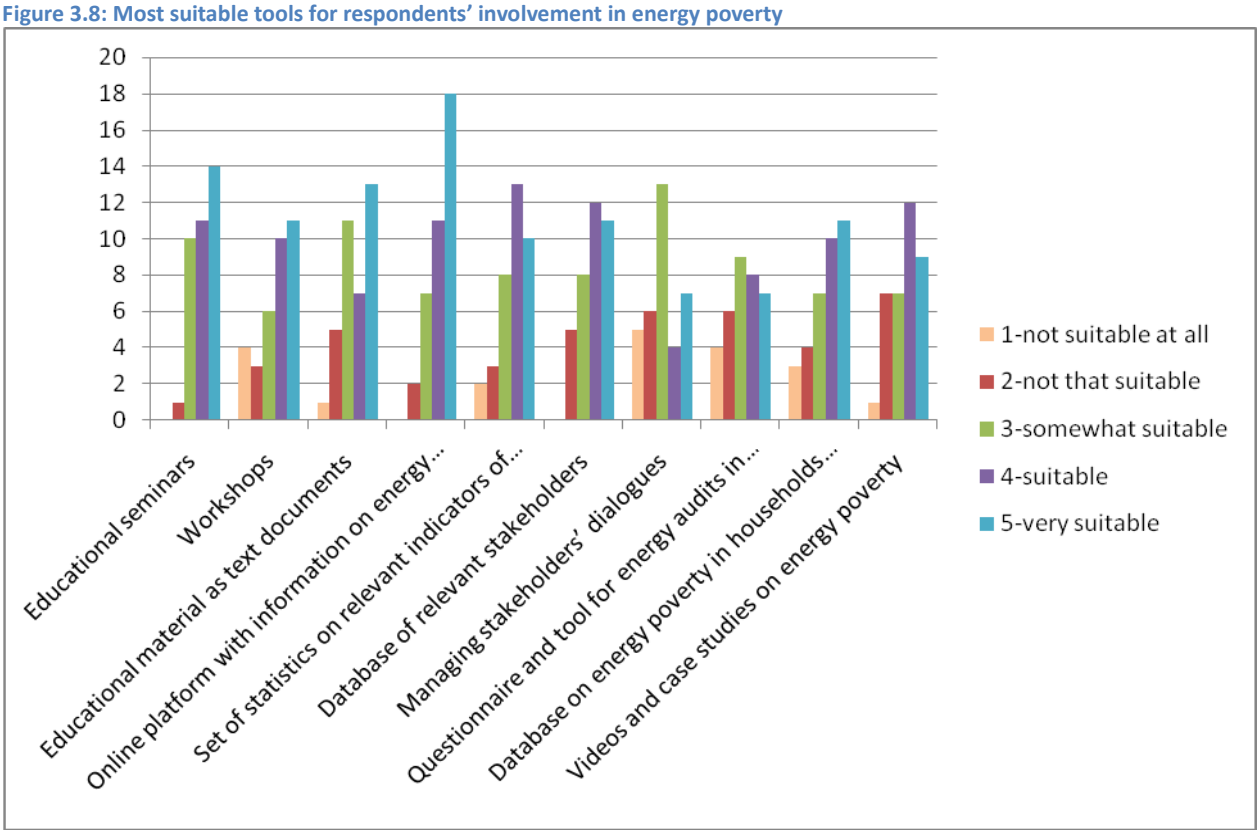


Figure 3.8: Most suitable tools for respondents' involvement in energy poverty

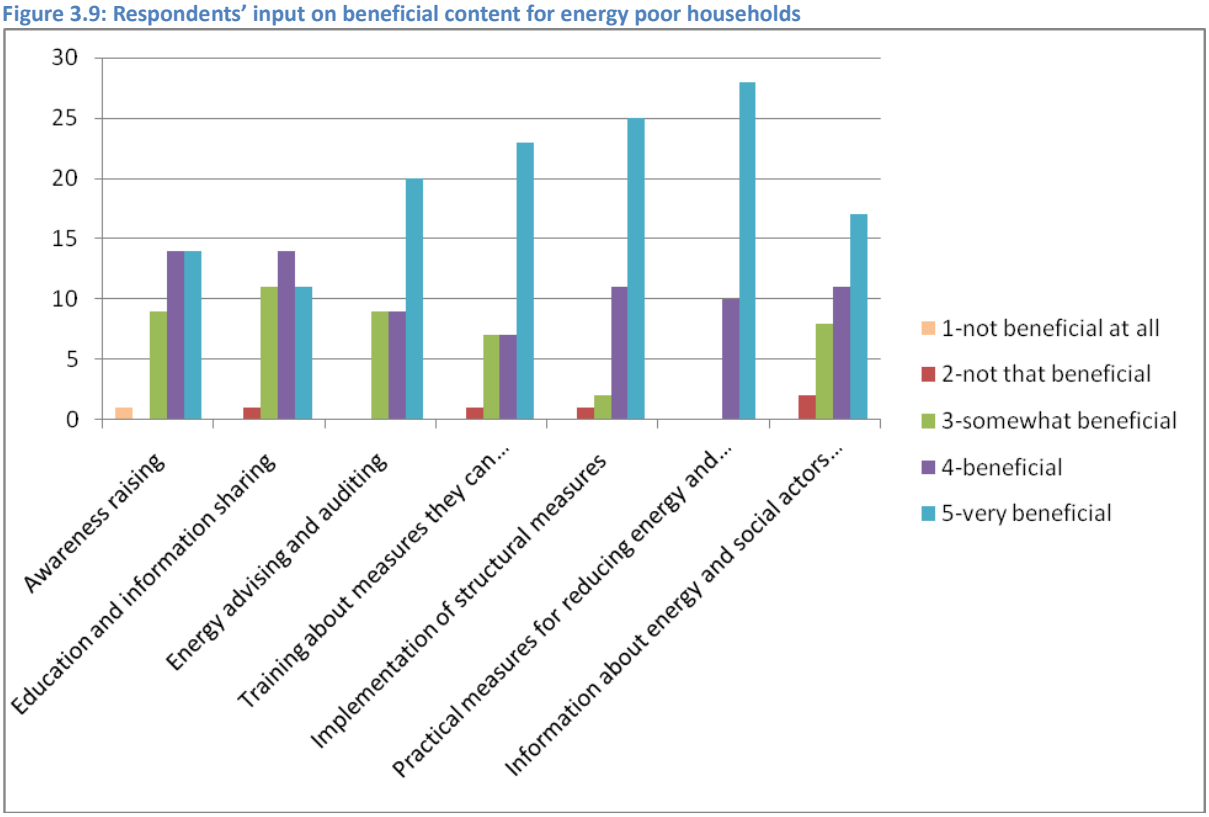


Respondents have also mentioned some other tools and content that they see as useful for their work (as stated by them):

Materials
Informing people
Change in the legislation and abolition of bureaucracy

3.3 Households' needs in the area of energy poverty

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

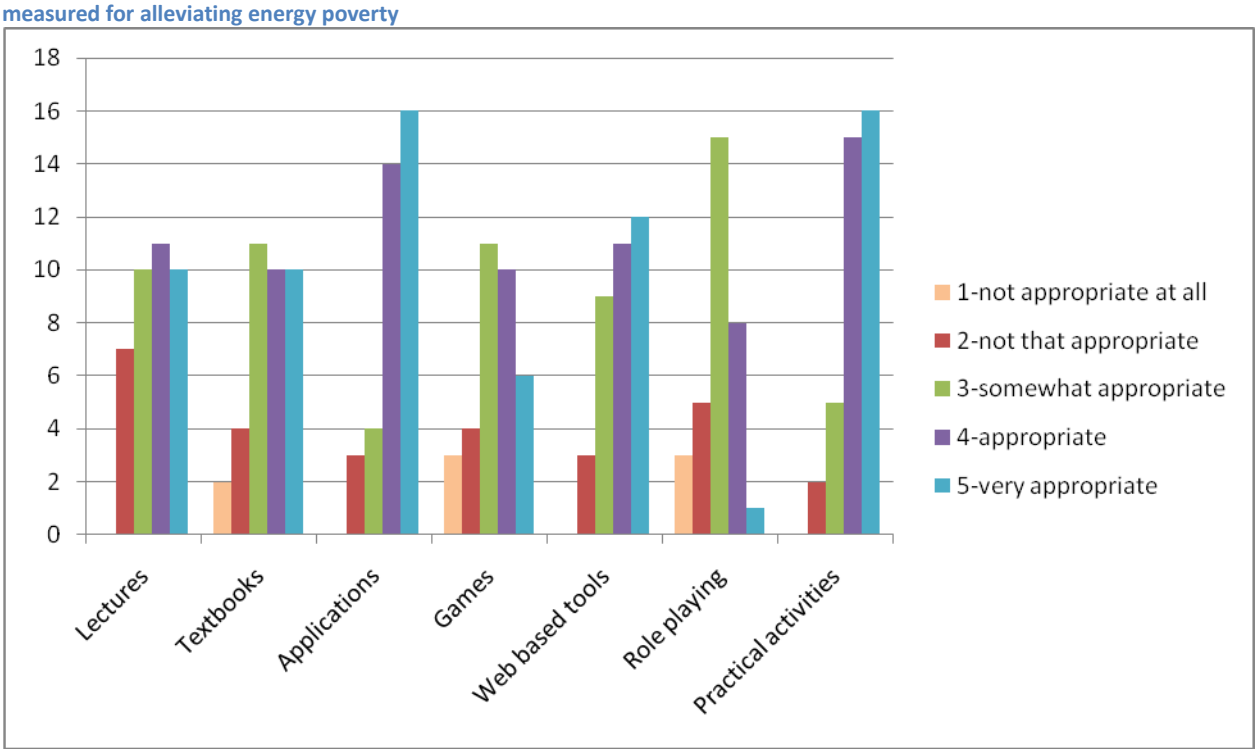


Respondents have also mentioned some other content that they see as beneficial for energy poor households:

In-House visits to see the problems & discuss possible solutions adjusted to the particularities of each case.
Availability of financing is important.
Grant access for energy poor households to implement energy efficiency measures
Energy poor households it's mostly a social issue not a technical one. Technical solutions are of course helpful but they don't solve directly the issue. There is need for political decisions and systematic change, so for the issue to be solved ones and for all.
National funding to reimburse, policies for reduced vat, funding for energy renovations
Motivation

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

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

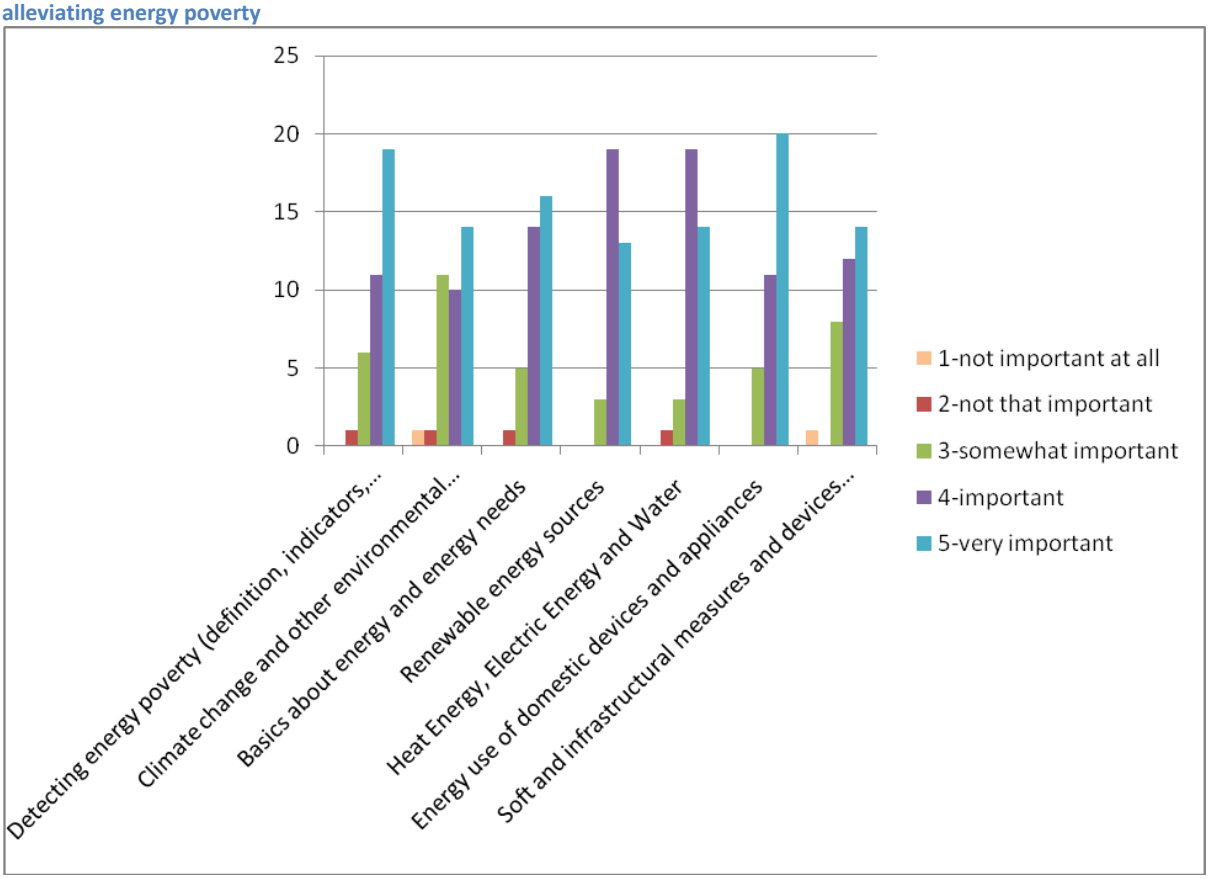


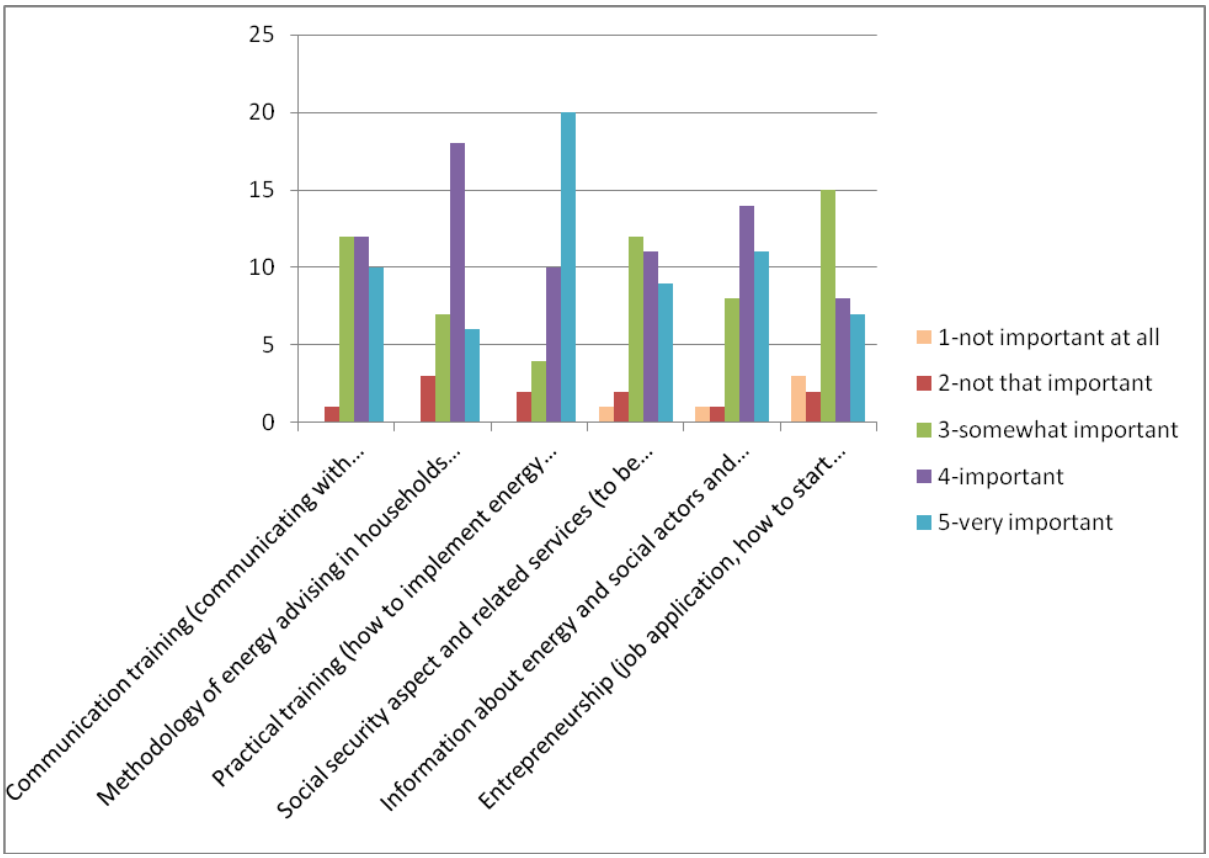
Respondents have also mentioned one more approach/tool that they see as appropriate for education about energy poverty and measures for alleviating energy poverty(as stated by them): calculation of economic profit.

Majority of respondents (85%) think that educational tools should include the possibility of contributing new ideas, notifying the authors about shortcomings and bugs, and proposing solutions for improvement of the tool. No one thinks that they should not have these features. Remaining 15% stated that they don't know.

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

Figure 3.11: Respondents' input on importance of topics for education about energy poverty and measures for alleviating energy poverty

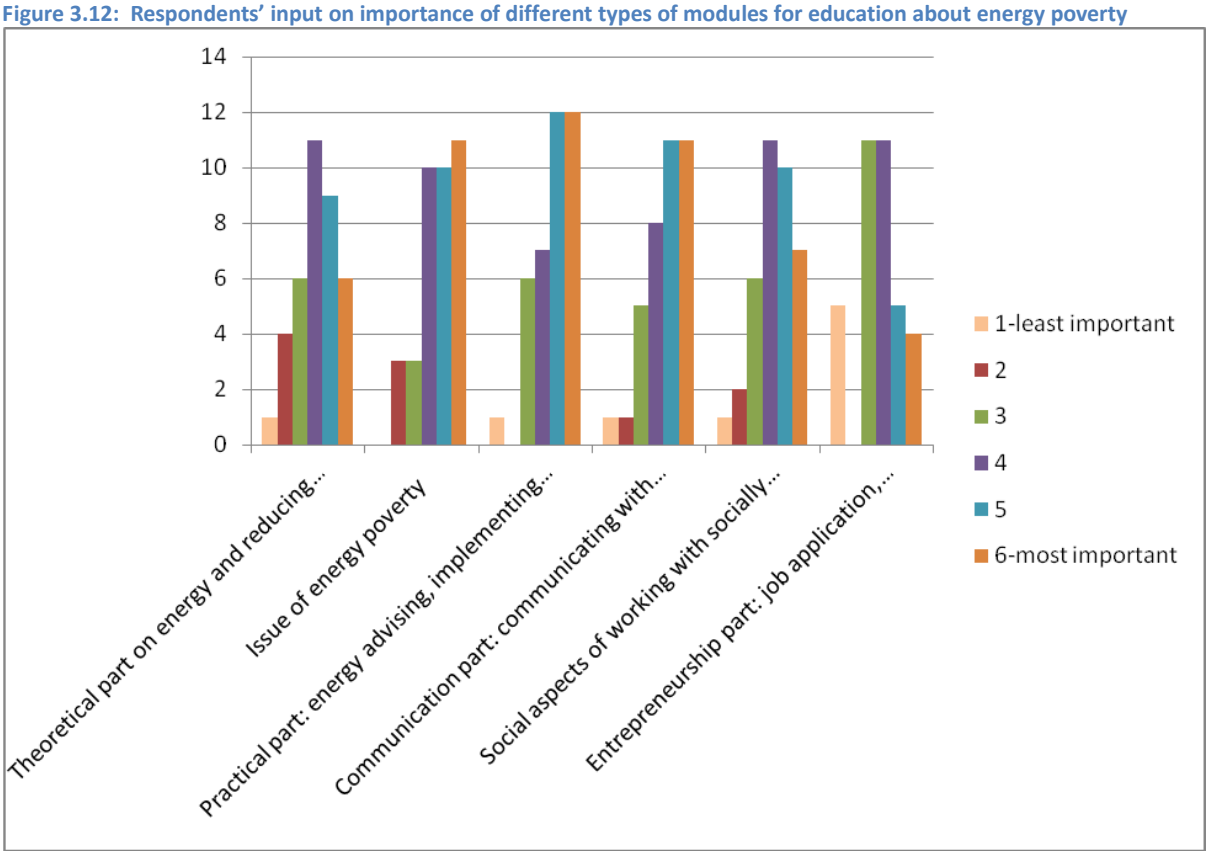




Respondents have also mentioned some other content that they see as appropriate for education about energy poverty and measures for alleviating energy poverty (as stated by them):

- “Energy efficiency certificate and the respected guidelines, as they comprise a trustful indicator of the energy situation of a building and how it can get better.”
- “Needs in education for households and for stakeholders are actually really different. For households it is really important to know the basics on energy consumption and not just the measures.”

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



4. Country specifics on energy poverty

Average income in Cyprus cannot be considered as low according to recent statistics, but it is worth mentioning that the economical crisis that affected European Union, affected also 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 analogy with their salaries. According to Eurostat [4] the electricity prices in Cyprus are average in comparison with other countries, but big price increases were observed in Cyprus between 2016 and 2018.

We have to mention that special low prices for electricity are available in special cases, such as for households in need. Also, funding is given to energy poor households for instalment of photovoltaic panels, and other energy related upgrades into their house.

Building high energy efficiency homes is an issue that is just now beginning to be considered by construction companies. As an example, we can refer to the fact that even though in Cyprus there is mostly sun light during all months of the year, it is only a few months ago that the legislation changed as to be necessary for new houses constructed, to have photovoltaic panels installed.

Furthermore, the majority of the population still has negative feelings about consenting to have an energy efficient home designed and built, as they believe that it may be unnecessary. Thankfully, due

to the new legislation and due to the new generation of architects and engineers, energy efficient homes will start to appear.

In Cyprus, cooling is a very important and major issue in households. During summer months the island experiences very high temperatures and humidity levels, demanding for cooling not only during day light hours but even after the sunset.

References

[1] http://www.social-electricity.com/

[2] http://www.cea.org.cy/app/CEA_energy.html

[3] http://enerfund.eu/ , http://www.cea.org.cy/enerfund/ http://app.enerfund.eu/

[4] http://ec.europa.eu/eurostat/statistics-explained/index.php/Electricity_price_statistics