

BRIEFING

Offering energy advice to low-income households: best practices

Insights from the seminar:
Energy Advice
To re-watch the seminar





Advisory measures for energy-poor households are services that have proven to be invaluable in the recent energy crisis.

This ENPOR seminar presented the cases of Austrian and Dutch energy advisory measures for energy-poor households, with various methods implemented, the challenges they faced, and the lessons learnt.

The goal was to reach a consensus on the most common characteristics of advisory measures for energy-poor households.

Visual language for energy-poor households

Target group-specific information for the hard-to-reach by Kerstin Schilcher (Austrian Energy Agency)

In Austria, there is a wide spectrum of measures targeting energy-poor households. Following the increased energy cost burden for the Austrian population due to the war in Ukraine, several measures were implemented targeting the general population and energy-poor households. These measures are shown in Figure 1 and Figure 2.

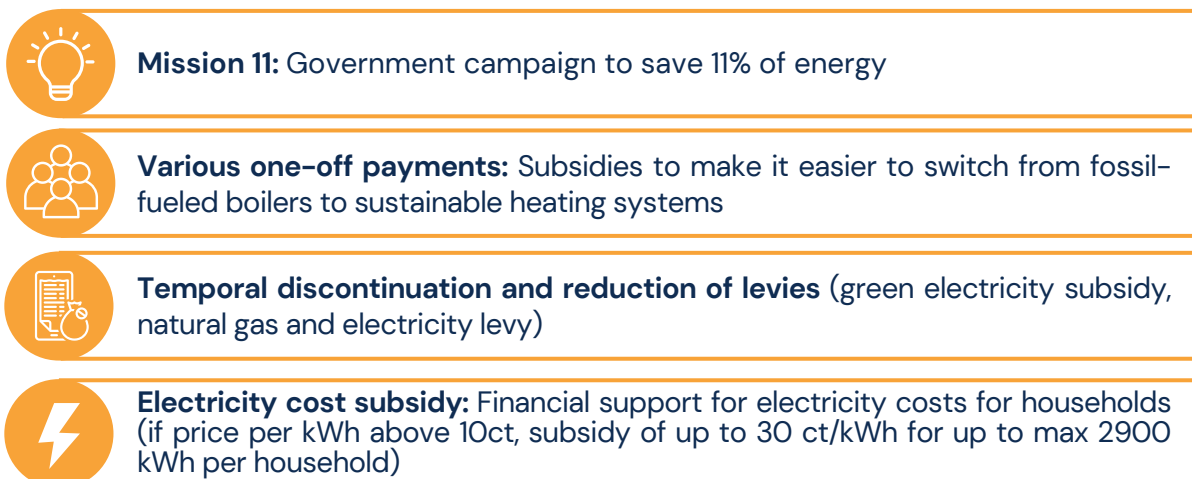


Figure 1: Various support services and measures for specific target groups.

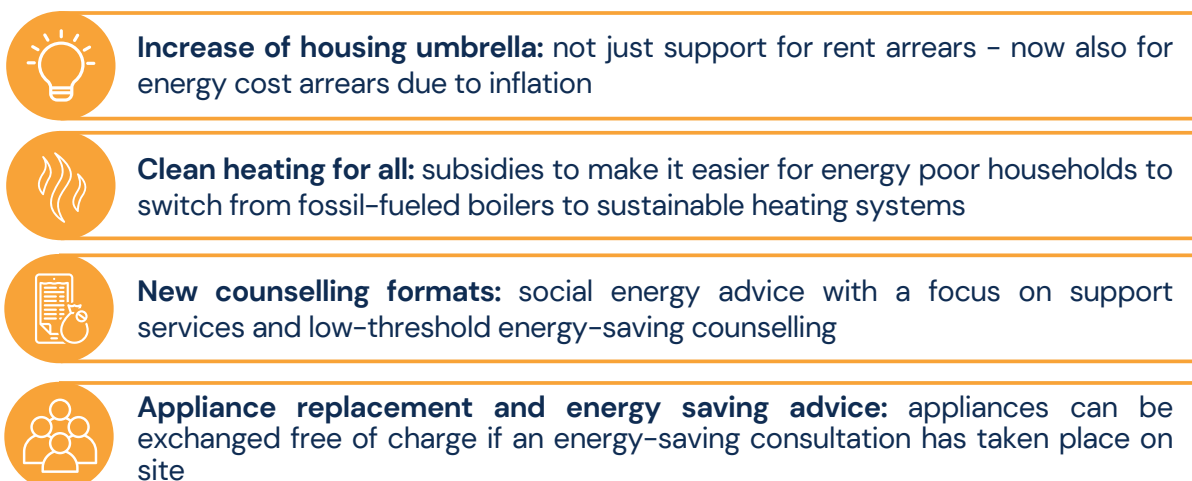


Figure 2: Measures that relieve energy-poor households and those threatened by energy poverty.



While implementing such measures, the Austrian Energy Agency (AEA) has identified the **difficulty to reach energy-poor households, especially when this is attempted through material rich in text**. In this respect, many of the measures presented in Figure 1 and Figure 2 were supported with **information factsheets and visual language**.

To develop the information factsheets and the respective visual language, AEA focused on a **co-creation process in cooperation with "DIE UNWELTBERATUNG", an experienced energy advice service, specialised in delivering face-to-face advice**. The co-creation process included the update of already developed factsheets that contained excess technical information in terms of their content and the promotion of accessibility through visualisation. Then, the updated factsheets were tested in the

pilot phase of the co-creation process, via face-to-face advice sessions, and the respective feedback received from the participating households, which led to their finalisation.

The cooperation with **"DIE UNWELTBERATUNG"** took place, to address trust issues. For the advice services to be effective, except for providing simple, easy-to-implement and cheap solutions and measures to reduce energy consumption, **the willingness of energy-poor households to accept offers of support requires trust**. This trust can be built via repeated home visits by energy consultants specialised in energy-poor households, such as "DIE UNWELTBERATUNG".

Furthermore, the already available information was **conveyed with illustrations to increase accessibility**, as illustrations can speak a thousand languages. More specifically, as shown in **Figure 3**, the available rich-in-text factsheets were transformed into illustrated factsheets with easy-to-implement energy-saving tips. A graphic designer was engaged to translate the tips into illustrations, and the illustrated factsheets were tested during the pilot phase in 50 households.

Kühlen und Gefrieren

- Die optimale Temperatur bei Kühlgeräten beträgt +4 °C bis +6 °C und bei Gefriergeräten bis -18 °C. Je kälter, desto höher der Stromverbrauch.
- Lüftungsschlitze freihalten
- Regelmäßig abtauen: Starke Eisbildung ist ein Zeichen für eine zu niedrige Kühltemperatur oder defekte Türdichtungen – der Stromverbrauch steigt beträchtlich.
- Warme Speisen erst auskühlen lassen und dann in den Kühlschrank stellen.
- Stellen Sie Kühlgeräte möglichst nicht neben dem Herd auf.

Ein 4-Personen-Haushalt kann so ca. 28–70 Euro pro Jahr einsparen!

Geschirr spülen

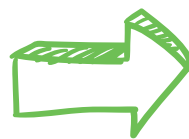
- Temperatur runter: Waschen Sie das Geschirr bei niedrigen Temperaturen, das Aufheizen braucht die meiste Energie.
- Volle Ladung: Geschirrspüler erst einschalten, wenn er voll beladen ist.
- Vorwaschen ist nicht notwendig: Alles was im Geschirrspüler Platz hat und spülmaschinenfest ist, sollte auch damit gewaschen werden. Händisches Waschen im Waschbecken braucht viel mehr Wasser und damit mehr Energie.
- Komplett abschalten: Viele Geschirrspüler verbrauchen in der Standby-Funktion Energie.

Durch das Senken der Waschttemperaturen von 70 auf 50 Grad können Sie ca. 30 % Strom einsparen!

Wäsche waschen

- Temperatur runter: Eine Wäsche mit 30 °C entfernt mit einem heute üblichen Waschmittel 99 % der Bakterien und spart bis ca. 50 % der Energie, verglichen mit höheren Temperaturen. Außerdem wird die Wäsche geschont.
- Kurzprogramm verwenden: Eine Vorwäsche ist nur in Ausnahmefällen nötig, z.B. bei berufsbedingter starker Verunreinigung der Wäsche.
- Volle Ladung: Die Trommel gut anfüllen und eine Handbreite nach oben Platz lassen, Wäsche locker einlegen. Eine Überladung ist auch nicht gut, da die Waschwirkung deshalb leidet.

Bei einem 4-Personenhaushalt und 4 Waschgängen pro Woche können Sie durch Temperaturabsenkung ca. 27 Euro pro Jahr einsparen!



Refrigerator tips:

- Open the door briefly (checked)
- 1 cm → defrost
- Temperatur: -18°
- Temperatur: +6° - +7°
- Positioning the fridge in a cool location reduces electricity consumption by 5%.

Washing Machine tips:

- 1 x 40° wash
- 15 t-shirts
- 100 hours
- 1 lunch
- 130 slices of toast

Figure 3. Example of the revision of an available rich-in-text factsheet to an illustrated one.

Due to the challenges of energy advice services, especially in the form of advice sessions to a household, **having factsheets with graphic elements was proven very helpful**.

In the case of household members not able to attend the energy advice session, the visualised factsheets can provide information in an effective manner.

The level of acceptance of the reviewed factsheets by the participating households was extremely high. Due to the interest of many stakeholders to use the new material, cooperation with the Austrian Ministry of Climate Action was possible. **The ministry financed the translation of the original German version into five languages:** English, Turkish, Bosnian-Croatian-Serbian, Arabic and Farsi which led to a strong **increase in the accessibility of the factsheets**.



Overall, within the framework of the ENPOR project, widespread use of the material was made possible.

Find all the factsheets in various languages on the ENPOR website:



The developed material is now being used throughout Austria in energy counseling and contributed to sustainably improving its quality.

Furthermore, **the Austrian Ministry for Climate Action finances the printing of advisory material**, and more than 140,000 copies have already been ordered.

The visualised material developed by the co-creation process is used by the Austrian Ministry of Social Affairs in its support offers, in energy consultations carried out in the housing umbrella support programmes and in the households' electrical appliance exchange programme. Moreover, the material is also made available to newly trained advisors as part of the Austrian Social Energy Advice training.

Following the demonstrated interest, a new factsheet on water-saving tips is under development, with further translations into Ukrainian and Russian planned.

Social Energy Advice: A new concept to complement traditional energy advice by Barbara Alexander-Bittner (AEA)

Klimaaktiv, the Austrian Climate Protection Initiative was founded in 2004. Through a large network of partners, its primary objective is to introduce and promote climate-friendly technologies and services.



Cooperating with a large network of partners, Klimaaktiv focuses on high-quality standards, giving advice to households, businesses, and communities, while one of its key activities is to provide education and training to professionals.

At this point, 20 partner organisations are branded as Klimaaktiv partners, while since 2004, 36,500 participants have been involved in the Klimaaktiv training and professional education programmes.

Only in 2022, 7,000 professionals participated in Klimaaktiv branded training. **This training includes education on photovoltaics, heat pump installation, biomass heating installation, energy efficiency in buildings, energy consulting, energy efficiency in production, energy management, and others.**

To train the professionals, Klimaaktiv is forming partnerships with educational institutions.

Moreover, an integral part of the training approach is to increase the visibility of the specific education and training (green skills) of the professionals as well as the visibility of specific skills. While doing so, Klimaaktiv seeks to identify the need for further training and support new training formats, like the Social Energy Advice.

Social Energy Advice is based on two basic main topics. **The first one is a quality standard developed specifically for the Social Energy Advice and the second one is a tailor-made training programme.**

Currently, in Austria, there are established household energy advice services. **The established energy advice services provide energy advice on-site, online and through phone calls, usually initiated by the households. They are focused on the technical assessment of the building and include recommendations on building renovation and heating system exchange, as well as funding and investment advice. The format of the services is one-off advice, provided by a technical expert, usually following a written protocol. Finally, they foresee the training of energy advisors to focus on technical knowledge and skills.**



In this context, the Social Energy Advice was developed because it was confirmed that there is a blind spot for low-income households.

Low-income households have specific needs that the energy advisor needs to be aware of. It is important to understand that those households face difficult living circumstances and are usually struggling with language barriers. In addition, the advisor must acknowledge the fact that energy bills are only one issue among many others, while the options for action are limited and deepening the understanding of energy bills, heating and electricity demand is more than crucial.

Considering these, as part of the first step, i.e., the quality standard, the “energy advice services for households at risk of poverty”, the experience was received from previous endeavors. The energy advisors must understand that advice is at the intersection of energy consulting, a technical subject, and social work. Moreover, energy advice must deliver information in an appropriate format, duration, and venue.

Apart from these training modules, there is a networking session every month, where participants can exchange experiences.

In addition, “energy advice services for households at risk of poverty” are required to include appropriate methods, materials, and equipment, while minimum qualifications of the energy advisors should be set, including the perspective of both energy and social advisors and the affected households.

The second step of the Social Energy Advice is the training programme for social workers. The basic requirement for participation is for the candidate to work as a social advisor. The training is carried out by energy advisors and social workers and among its primary objectives, **the focus on simple recommendations for action and awareness raising, as well as behavioural changes.** In this context, reducing energy consumption is secondary, while its technical content focuses mainly on heating, electricity, and energy bills.

The structure of the training modules is presented in Figure 4.

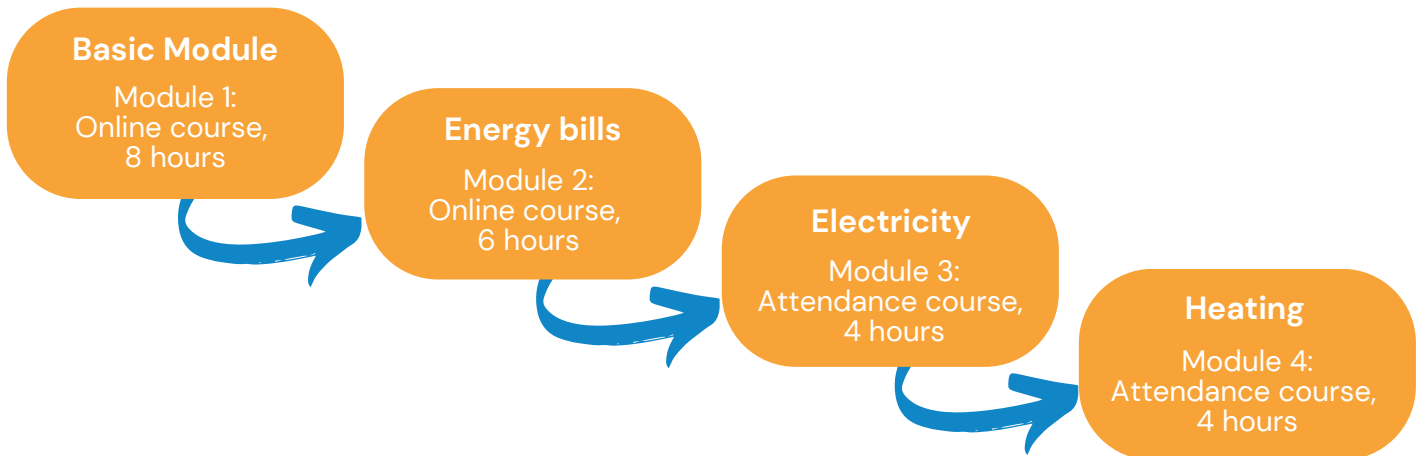
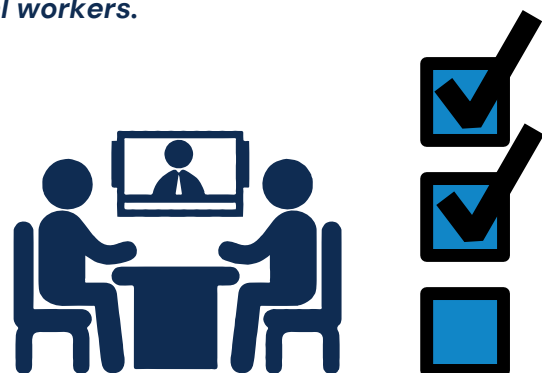


Figure 4. Social Energy Advice training modules for social workers.





In Figure 5 there is an example of how a trainer, who is a social worker working with energy-poor households, can use easy and practical ways to check and show household members how to check the efficiency of their windows, along with easy and effective ways to improve their energy performance.

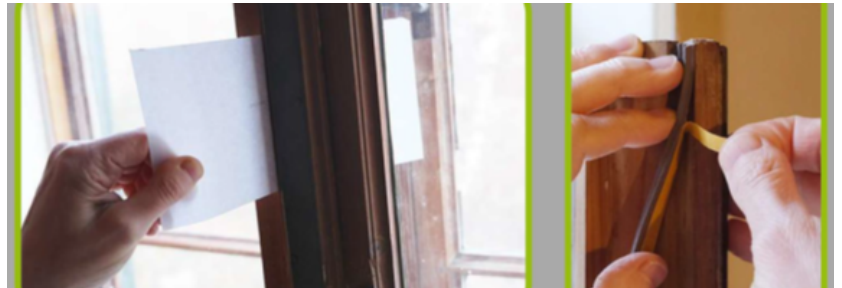


Figure 5. Social worker demonstrating how to check and improve the energy performance of a dwelling's windows.

The next example shown in Figure 6 includes some pictures of typical heating installations, which are explained to the social workers that are under training. More specifically, social workers are informed on how they operate and what advice they can offer according to each case.



Figure 6. Examples of typical heating installations.

Furthermore, in Figure 7 an example of an illustration that can be used by social workers to demonstrate the proper handling and settings for an efficient heating system is presented.



Figure 7. Illustrated example of a proper heating system setting.

Figure 8 aims to explain to the social workers under training how the architecture of a building and the position of an apartment can impact their energy consumption and which positions of the building are the most disadvantageous ones.

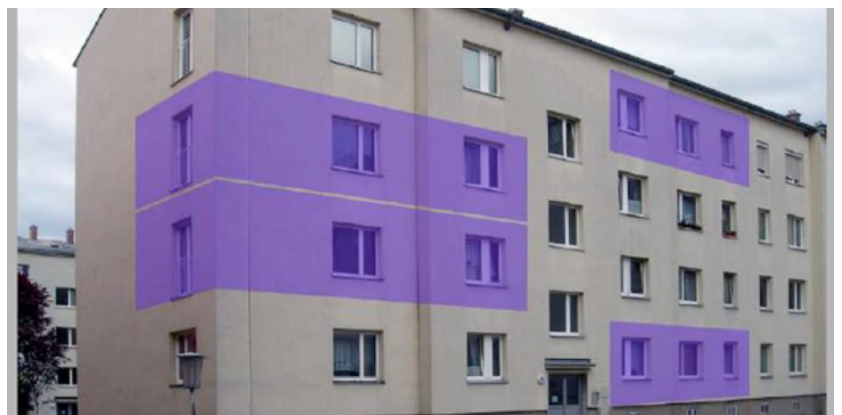


Figure 8. Picture highlighting the most disadvantageous positions regarding the energy performance of an apartment.



Finally, the training programme provided materials and equipment.

Electricity meters, room thermometers and low threshold information leaflets on the topics of heating, cooling, and electricity in several languages (e.g., Farsi, English, Turkish, German, Arabic, Bosnian, Serbian, Croatian) were used. Some of these leaflets were developed as part of the co-creation process in cooperation with “DIE UNWELTBERATUNG”, described in the previous presentation.

In conclusion, some key enablers for the success of Social Energy Advice were determined. **Network building between social and energy advisors and energy providers was crucial.** Moreover, **sufficient funding for on-site consultancy and simple saving measures, like the exchange of electrical appliances, was proven to convey reliability and give perspective.** Also, the provision of material and equipment for advisors, allowing for learning loops and keeping close to the energy advisors led to the success of Social Energy Advice, as over 200 social workers have been trained in the last six months.

Insights and innovations in Energy Advice – The Energy Box programme by Nanda Vrieling (Center of Expertise Smart Sustainable Cities, HU University of Applied Sciences Utrecht)

The Energy Box is an energy efficiency programme in the Netherlands examined and re-designed in the context of the ENPOR project. The project started in 2014 in the municipality of Utrecht in collaboration with two housing organisations. It served as a supplementary project parallel to the renovation of buildings done by social housing organisations. Its main goal is to advise tenants on what they could do to save energy in their houses. **The Energy box approach consists of four steps**, presented in Figure 9.

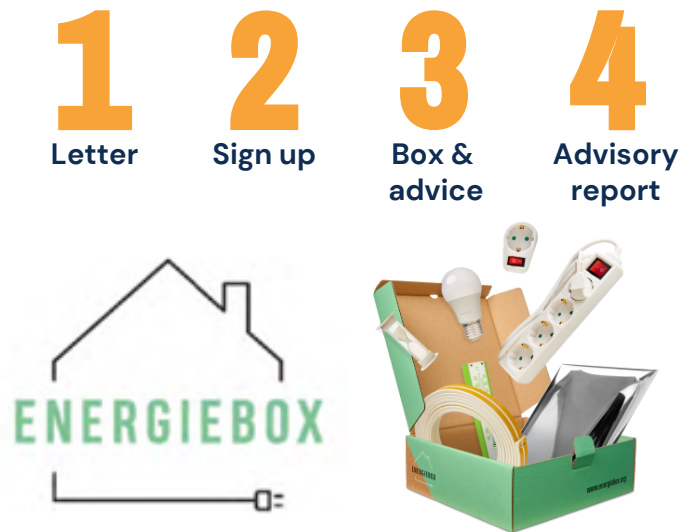


Figure 9. The Energy Box Approach

The first step concerns sending a letter (physical or digital) to tenants asking them to sign-up for the offer of a free Energy Box with small appliances to save energy in their house. If the tenant signs up for the Energy Box, which is the second step, the third step is sending the box along with written advice from an energy coach. As a final step, the energy coach offers instructions regarding the content of the box, taking into account the state of the dwelling and providing specific energy-saving suggestions.

Energy Box has been expanded and reached several municipalities, which are responsible for its financial support, private renting organisations and private investors. Currently, the programme is active in 19 municipalities with more than 46,000 residents being reached since 2014, and more than 120 coaches being trained. **For average residents, the implementation of the Energy Box programme can lead to an almost 10% reduction in a household's energy consumption.**

This is achieved by using the material included in the box. More specifically, as shown in Figure 10, the box includes two led lights, a power strip with an on/off switch, a radiator foil, a shower timer, a thermometer (for fridge/freezer) and others.



What's in the box?

- Two LED lights
- A power strip with on/off switch
- radiator foil
- a shower timer
- a thermometer (for fridge/freezer)
- a feed-through plug with on/off switch
- a time switch
- weatherstrips
- a mailbox draft barrier (if needed)



Figure 10. The contents of the Energy Box.

In addition to the included material, the role of the energy advisors is also crucial for achieving the objectives of the Energy Box programme. The energy coaches are responsible for providing advice to the participating tenants. They undergo special training because they often are long-term unemployed people with no technical background. They offer door-to-door visits, by appointment or by phone, they obtain information about the current state of the house and determine the measures that need to be taken to achieve energy savings. They also offer advice in the form of small measures and behavioural changes. In the end, they provide an advisory report with personalised energy-saving advice.

As already mentioned, the Energy Box is primarily financed by Municipalities, social housing corporations and private investors. Municipalities are responsible for reaching homeowners, social housing corporations for reaching tenants, and private investors to reach private tenants, while landlords have been proven the most difficult group to reach.

The ENPOR research approach focused on the operation of the Energy Box. The main objective was to determine the successful and the less successful aspects of the initiative to increase its effectiveness and to reach the energy-poor households and private tenants. This was achieved with surveys amongst citizens and/or previous participants of the programme.

Additionally, the ENPOR REACT groups with multiple stakeholders provided useful insights in regard to the re-design of the programme, focusing on specific energy-poor target groups with an extra risk of energy poverty (e.g., migration background, students, etc.).

During this process, several challenges and potential solutions were identified.

Firstly, the **language barrier** is a challenge hindering the implementation of the programme. To address this, two solutions came up:
(i) translation of the available communication material, and
(ii) diversification of the pool of coaches.

In addition, **trust issues** were also identified to work as barriers, as it is essential to persuade vulnerable groups to accept advice.

Building trust with the population, especially with people that may potentially be cautious towards governmental initiatives, requires a more personal approach. This could be addressed by making use of local networks and conducting shorter or at-the-door visits, and group meetings.

Furthermore, social workers must understand the **multitude of problems low-income and energy households face**. Cooperation with local social organisations can be helpful to understand the problems of the populace through constant interaction that can be achieved through multiple visits.



Another matter that can be identified through multiple visits is **the long-term effects of the behavioural changes**. Thus, to persuade these groups to change their energy behaviour multiple visits and low-key and visual reports are required. Finally, **increasing the sensitivity of coaches** is also important, in order to provide their advice in an effective manner. The latter can be achieved through their training and knowledge and experience exchange via targeted workshops.

The training of energy coaches is an important procedure. It aims to develop effective conversation techniques and to promote sensitive/caring communication with energy-poor households. Stimulating behavioural change is another goal of the training. Finally, experience can be gained by role-playing games and by exchanging experiences with fellow coaches. In Figure 11, the steps for an effective coaching session with a household are presented.

To conclude, through Energy Box more focus on reaching energy-poor households has been achieved. **The fact that the coaches were previously long-term unemployed proved to be effective as they are closer to the targeted vulnerable groups.** Finally, the ENPOR research has led to multiple interventions.

The most important are:

- ✓ the increase of diversity and training of coaches;
- ✓ the effective use of communication means;
- ✓ the use of local networks and social organisations;
- ✓ the low-key approach and the multiple visits.

Personal goal setting
Listen, summarize and question
Autonomy
No judgement
Empathize
Trust

Figure 11. Effective energy advice coaching steps.

Indicative key conclusions from all presentations:



Trust is the key



Easily comprehensible information



Solutions need to be simple and easy to implement, personalised covering the needs of the target group



Training of the energy advisors/ social workers to be able to inspire the target group is of utmost importance

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