Policy Paper:

Energy Poverty in the Danube Region

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ENERGY POVERTY IN THE DANUBE REGION

This paper presents recommendations for replicating good practices in tackling energy poverty in the Danube region. It introduces the topic of energy poverty and a typology of measures, presents sources of replicable examples and provides recommendations for replicating them in the Danube region.

Background

This paper was prepared within the framework of the European Union Strategy for the Danube Region Priority Area 2 Interreg-Danube along with the Study on Energy Poverty in Danube Region. The EU Strategy for the Danube Region (EUSDR) is a macro-regional strategy adopted by the European Commission in December 2010 and endorsed by the European Council in 2011. The Strategy was jointly developed by the Commission, together with the Danube Region countries and stakeholders, in order to address common challenges together. The Strategy seeks to create synergies and coordination between existing policies and initiatives taking place across the Danube Region. The Strategy is not about funding, it is about closer cooperation!

European Union Strategy for the Danube Region Priority Area 2 – Sustainable Energy

Priority Area 2 (PA2) – Sustainable Energy has three main objectives to follow during its work. First, PA2 aims to coordinate regional energy policies on various topics. Second, PA2 helps with the integration of the energy markets of the non-EU countries and supports them in the implementation of the EU energy acquis. Third, PA2 is committed to launching cutting edge technology developments, which will increase the energy efficiency of the region and enhance the use of renewable energy sources. PA2 is coordinated by two partners: Czechs and Hungarians. The Czech side is represented by the Office of the Government of the Czech Republic and is currently in the position of the lead partner and the Hungarian partner is represented by the Ministry of Foreign Affairs and Trade of Hungary.

Definitions of energy poverty

The term “energy poverty” is usually understood as a deficiency in energy supply that has negative consequences on affected people. This definition is rather vague and does not cover all aspects of this phenomenon. Thus, it is not useful for designing and implementing efficient policy measures. To bring even more confusion, some countries use the term fuel poverty, which, however, overlaps with the term energy poverty only partially.

A very frequently cited definition by the European Commission is also criticized as vague (5). Unfortunately, there is no other commonly used definition of energy poverty among European countries.

> *"A situation where a household or an individual is unable to afford basic energy services (heating, cooling, lighting, mobility and power) to guarantee a decent standard of living due to a combination of low income, high energy expenditure and low energy efficiency of their homes."*

There are only a few countries that have officially defined energy poverty on the national level (Cyprus, France, Ireland, Scotland, Slovakia, United Kingdom). Certain forms of unofficial definitions can be found in several other countries (e.g. Austria, Italy, Malta).

An example of a useful definition that also includes a specific threshold comes from Ireland, and uses the expenditure method of measuring energy poverty, whereby "*a household that spends more than 10% of their income on energy is considered to be in energy poverty".*

A common definition of energy poverty across European countries could also bring clarity into understanding the scope of this topic, especially considering the domain of mobility into the definition. Mobility is included in the definition by the European Commission, but it is not mentioned in all national-level definitions. However, before any definition is accepted by other countries, it is necessary to consider specific local conditions.

Factors contributing to energy poverty

According to various reports there are three main factors that contribute to energy poverty: 1) Low incomes, 2) Poor thermal efficiency and low-quality housing and 3) High and rising energy costs.

However, their causes must be sought in a wide range of social changes and phenomena. The main social issues further affecting energy poverty include:

- Low income
  - Unemployment
  - Unqualified and low paid jobs
  - Property seizures
- Regional situation
  - Poor thermal efficiency and low-quality housing
  - Strong link between bad housing, energy demand and poverty – particularly for vulnerable groups
  - Inability to reach subsidies or loan for energy efficiency improvements
- High and rising energy prices
  - Increase of fuel prices
  - Deregulation and privatization that lead to perception of energy as a general commodity rather than public good
  - Tax on climate protection policies

Other factors that play important roles but are not often cited as one of the main causes of energy poverty are interpersonal variables such as age, education, health and possible health restrictions, discrimination, family situation and social ties. Some of these factors are included in the term "vulnerable consumer".

Although it is not listed as one of the main factors of energy poverty, knowledge and ability to acquire essential information about cost-effective solutions are very important factors as well. There are several projects aimed at closing the knowledge gap by including information on support programmes, subsidies, but also specific low-cost measures to reduce energy consumption. These include the ASSIST, SAVES2 and Stromspar-Check projects.

Measures tackling energy poverty

Based on a literature review and analysis of several projects aimed at energy poverty, the following **types of measures** can be distinguished:

A. Legislation measures and regulations
B. Counselling and Social Work
C. Subsidies
D. Technical solutions
E. Other types of measures

This chapter presents examples for each of these five types of measures mentioned above. These measures can be found all across Europe (north-south, west-east, and central Europe), including countries of the Danube region.

Legislation and regulations

The group of measures related to legislation is based primarily on EU regulations, EU directives and their transposition into national policies. Probably the two most important terms anchored in the law are “energy poverty” mentioned in the Energy Performance of Buildings Directive (EU) 2018/844 and “vulnerable customers” mentioned in the Electricity Directive (2009/72/EC). Austria, Croatia and Slovakia are the only three EU Member States from the Danube Region, which have transposed measures from the Energy Performance of Buildings Directive into national law so far. All member states have transposed the Electricity Directive (2009/72/EC) into their national laws already in 2011.

Counselling and Social work

Most tools in this category focus on information, communication and guidance. The examples include media campaigns, energy labels on appliances, or training specialists who can help with energy savings in households – so-called Home Energy Advisors (HEA). Energy ombudsman can be also included in this category.

Subsidies

All states in the Danube region provide some form of subsidies to reduce the consumption of non-renewable energy in households to improve the energy efficiency of buildings, heating sources and other appliances. However, the crucial challenge remains is to ensure most fragile households will also be able to reach them. One of the typical problems is their

repayment, for example, as households at risk of energy poverty often cannot pay in advance the money they have arranged.

Technical solutions

Technical solutions partially overlap and are coupled with solutions involving subsidies since households often receive subsidies for various technological measures or equipment replacement. It isn´t usually the case to receive subsidies for so-called soft measures, such as consultations. However, technological measures can be implemented without subsidies. Typical technical solutions include thermal insulation of the envelope, replacement of windows and doors, or replacement of the heating source.

Indirect ways of reducing energy poverty

Energy poverty can be addressed indirectly by collaborating with policymakers and professionals from various areas and helping them to take energy poverty into account. There are following examples of topics into which energy poverty can be easily incorporated:

- Retrofit programmes
- Smart City
- Energy management
- Social work and counselling
- Elderly housing and home care

Replication and scaling-up

Replication is a process of implementing an existing solution into a new context. Projects in energy poverty can replicate a whole procedure, policy, complex solution or just a specific step, measure or a tool from another project.

It is not just the result (technology, policy, measure) that can be replicated. Sometimes the most valuable lessons lie in a process of assessing the problem and developing the solution. Replicating this process can lead to a significantly different result which works better for a given context.

Successful replication requires a good understanding of both solutions to be replicated and the **specific context** in which they are being implemented.

Scaling-up is a process of taking a measure or solution that has been proven on a smaller scale and implementing it on a large scale.

Local context

Local context represents a set of conditions in a given time and place. Solutions that worked well in one place at a given time don´t have to fit elsewhere at all, or they might require

significant modification. A replicated solution needs to be adapted to fit the local context, but sometimes local context needs to be changed as well. For example, processes in involved organizations, funding schemes or legislation can be changed in order to support new solutions. A good way to ensure this is **stakeholder engagement**.

Stakeholder engagement

Stakeholder engagement is a process of involving all relevant stakeholders in projects that require an understanding of local context and a systematic, collaborative approach to tackle a complex phenomenon such as energy poverty. Stakeholder engagement should aim to:

- Inform stakeholders about the aim of the project and planned activities
- Improve understanding of stakeholders needs and capabilities
- Involve stakeholders in co-design of solutions and evaluation
- Encourage stakeholders to participate in the implementation
- Support mutual understanding, cooperation and sharing

The process should involve representatives of all stakeholders who can be impacted by the project/programme and/or who can influence its outcomes. At the beginning of the planning phase of each project, stakeholder analysis should be performed based on which participation and communication strategy should be developed.

Stakeholder engagement can be carried out various levels of public administration: national, regional, city or neighbourhood. There can be an interaction of stakeholder ecosystems on different levels. For example, a national stakeholder ecosystem can initiate a pilot project with its own stakeholder/innovation ecosystem on a local level.

Various methods of stakeholder engagement can be combined over the life span of a project including repeated meetings with key stakeholders, interviews and surveys. The project team should include skilled facilitator and/or social scientists to select and implement appropriate methods. Stakeholder engagement should have defined link to other project activities and decision-making.

Stakeholder engagement can be combined with socio-economic analysis but should not be replaced by it nor it should be a substitute for it.

Pilot projects and living-labs

Pilot projects and living labs are a great way of evaluating and optimising a new solution or adopting an existing solution to a significantly different context. This means they can be used to generate new know-how or to generate local evidence enabling evidence-based decision making and driving further changes and development.

A pilot project is a project where a suggested solution is being tested in a controlled and limited way in real-life conditions. Living-lab is an ecosystem established to provide a platform for developing and testing solutions in real-life conditions. For example, urban labs

are established way of testing measures or technology in the context of a city (the lab itself is usually limited to a specific district and selected stakeholders.). Living labs can be specialised on a specific area of innovation (transport, energy, social services).

Any pilot project or experiment within living-lab should have defined scope and specific objective(s). There are several questions that should be answered before initiating a pilot project:

- Are we developing a new solution, or modifying existing ones?
- What was done elsewhere? What can we learn from previous projects?
- What is the motivation for the pilot project? What needs to be verified?[1]
- Who should be involved and how?
- What is the scope of the project?[2]
- How will the process be monitored?
- How will the impact be assessed?
- How will the outcome be used?

Key to successful pilots or experiments within living labs is the ability to **assess the impact** of a solution and **capture the know-how** the process generated.

Impact assessment and monitoring

Any project with the potential to generate new knowledge or evidence should be monitored and evaluated and every single project should have its key performance indicators (KPIs) defined.

Impact assessment aims to evaluate to which extent does a given project or measure fulfil its goals. The result of the impact assessment can be used for future decision making. It requires the project goals to be expressed in terms of measurable indicators. The project team should seek existing methodology for impact assessment or indicators to enable comparison of the project with other projects of the same kind. We recommend aligning the projects with terminology and indicators proposed by the EU Energy Poverty Observatory.

Monitoring aims to capture the evidence and lessons emerging over the whole course of the project and enables its proper evaluation. Monitoring is particularly important in pilot projects. Recording the process and evaluating what worked and why is the key to developing guidelines for replication and scaling-up. There should be measures within the project plan for capturing important lessons. This can be different for different types of measures and pilot projects.

[1] It is very common mistake to test “everything” in one project. It is a step-by-step procedure and the key is to identify where to start (where is the boundary of our existing knowledge) and where to end (what can be covered with given resources and time).

[2] Sometimes a quick experiment can be enough to verify the basic functionality of the solution and narrow the focus for further development and testing.

Sharing and networking

Developing and testing a new solution can be difficult and resource-consuming, more so if everyone would start from a scratch, worked on their own and kept the result for themselves. We should seek opportunities to learn from others´ success and mistakes and to share our own experience and know-how.

One way of doing so is to participate in international, national or regional platforms and initiatives or at least following their work and interacting with them. We already mentioned The EU Energy Observatory where anyone can find inspiration for their projects, get links to other relevant organizations on an international and national level or share their own projects. Other platforms can be more relevant for a specific type of stakeholder (e.g. Covenant of Mayors). Some can be useful to share the local experience.

Each project should start with a review of good practice and each project should have a dissemination plan and resources dedicated to sharing results of the project.

Because official project documentation and impact assessment rarely tell the whole story, the best way of learning and sharing is through direct contact. If you are interested in a project and need more information – contact the coordinating institution. If you have a measure or project you want to share, think of where you could present it and who could profit from the know-how then most. It doesn´t always have to be on an international forum dedicated to energy poverty.

Recommendations for replicating the success

1. **Involve key stakeholders from the start**

Key stakeholders should take part in defining the problem and local needs. This can improve their further involvement in the project and acceptance of its outputs. Every project should start with a proper stakeholder analysis to ensure all key stakeholder will be identified.

In projects tackling energy poverty, it is crucial to represent the interest and needs of the most vulnerable households. This can be done in collaboration with social workers or NGOs, who can help to identify and engage them.

2. **Analyse local factors contributing to energy poverty**

It is important to gather data about the status quo in a local context of the project. This is crucial for prioritization and targeting of measures as well as for impact assessment. The better the initial analysis is, the more precise will be your understanding of the local factors influencing energy poverty as well as existing resources and mitigating factors.

The analysis should combine expert assessment with objective socio-economic data. The EU Energy Poverty Observatory offers indicators that can be used for initial analysis as well as for impact assessment.

3. **Learn from others**

The key to replication is to identify the right solutions, breaking them down to understand what made them successful and transferring them to the local context. Look actively for inspiration and gather enough information to understand the solutions and policies you

intend to adopt. You can combine inspiration from several sources but keep in mind, they could come from various contexts and their success can depend on different factors.

Contact organizations and individuals with first-hand experience with the measure and ask them for advice or additional information. If relevant, organize an on-site tour with key stakeholders to increase their understanding of selected measure and engagement in the project.

4. **Look for indirect ways to reduce energy poverty**

Energy poverty doesn't have to be tackled by single-purpose initiatives only. Energy poverty can be incorporated into policies and measures in other areas like Smart city strategies, social housing, home care, social work or energy management. Look into existing policies, funding schemes and training programmes and align them with other measures tackling energy poverty. Promote energy poverty and educate other policymakers.

An example of an indirect way of tackling energy poverty is to the revision of current refurbishment funding schemes. They are often not accessible to the most vulnerable households due to the necessity of advanced payments or difficult administration and they are thus further increasing social divide.

5. **Look for synergies**

Identify organizations and projects working with your stakeholders in areas with potential to indirectly reduce energy poverty of your target group. Coordinate your activities, share data, provide feedback and incorporate each other's measures. Look for partners on a local level who might not deal with energy poverty or a related topic but understand the local context and can provide insight into the needs of local stakeholders.

In projects tackling energy poverty, synergies can be found with organizations in social work, energy managers, energy companies, municipal governments of local NGOs. Try to avoid exhausting your stakeholders by too many parallel structures and events. Coordinate stakeholder engagement activities with other organizations and consider creating joint events and platforms, where energy poverty is presented alongside other topics.

6. **Create a localized model**

Based on initial assessment and examples of good practice, create a model of the proposed solution. This model should demonstrate, how specific measures respond to problems identified in collaboration with key stakeholders. Create feasibility study describing the process of implementation and organizational models. Name specific organizations and policies and create examples set in the local context. Let key stakeholders comment on the draft of the study to ensure the proposed measures are seen as realistic and feasible.

7. **Experiment in real-life conditions**

Start with small, inexpensive pilot projects providing local evidence and demonstrating key aspects of proposed measures to the stakeholders. Set key performance indicators and evaluation mechanism to make sure the evidence generated by the project will be captured. Try to simulate real conditions by involving various household and real professionals, who are expected to carry out the solution.

8. Evaluate and adopt the solution

Reserve enough resources for the evaluation of the solution and create space for improvement. Involve your stakeholder in the evaluation and work with them on revised measures. The evaluation process shouldn't stop after the pilot phase. Collect continuous feedback and be ready to ready to react and adapt.

Adaptability is, especially in long-term projects and measures. The needs of your target audience or external factors can change and make your measures ineffective or counterproductive. Be open to support new measures enabled by technological development or by transformations of society.

9. Share what you have learned

Look for ways of making your experience accessible to others and receiving feedback on your solutions. Create a dissemination strategy, participate in conferences and seminars or organize dissemination events of your own. Make sure your project is accessible online including contact information of people responsible for each deliverable. Share your project through EU Energy Poverty Observatory. Don't forget to share the project within your organization.

10. Work within a peer-group

Look for groups of organizations and professionals with similar focus and interests. Choose the right group based on which organization or specialization you represent. Your organization can become part of a national or international platform or develop a project proposal within large consortium.

Your peer group or project consortium doesn't have to focus on energy poverty directly. For example, The Covenant of Mayors is a good way for city representatives to become part of an international platform, which has energy poverty within its focus among other topics. Individuals, organisations and projects focusing on energy poverty can be found on the website of The EU Energy Poverty Observatory. The directory involves national members, including countries of the Danube Region.