Interreg Slovenija – Magyarország

EnerTy

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Comparative analysis of regional, national and EU instruments in the fight against energy poverty

Version 2

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1. Executive Summary

1.1 Key Findings

1. **EU**

- The **EU has established a comprehensive policy and legal structure**, including the Clean Energy for All Europeans Package, Social Climate Fund (SCF), and the Just Transition Mechanism (JTM).
- **Robust funding mechanisms** (SCF, ERDF, JTF, LIFE) are in place, but uptake and implementation vary across Member States.

2. **Slovenia**

- Slovenia has **clear legal definitions**, **quantified national targets** (reduce energy poverty to 3.8–4.6% by 2030), and an **Action Plan with €34 million** allocated for 2023–2026.
- It uses **multi-channel instruments**: Eco Fund grants, ENSVET home advisory network, emergency electricity access, and integrated social aid programs.
- **Regional structures**, particularly in Pomurje and Podravje, are emerging as good practice examples.

3. **Hungary**

- Hungary **does not have a national definition or standalone strategy** for energy poverty.
- Existing instruments (e.g., utility price regulation, firewood support, rural renovation grants) **offer temporary relief but lack coordination and long-term vision**.
- EU funds like EEEOP+ are accessible but not clearly targeted toward energy-poor populations.

4. **Monitoring, Data, and Targeting Remain Weak Points**

- Slovenia is advancing in developing monitoring tools and definitions. Hungary **still lacks disaggregated data**, making it difficult to target interventions effectively.
- There is **no harmonized system for assessing outcomes** at the regional level in Hungary.

5. **Local-Level Implementation Is Critical but Uneven**

- Slovenian regions benefit from localized advisory hubs and integration with national programs.
- Hungarian regional efforts are more **fragmented and dependent on ad hoc municipal initiatives**, such as firewood distribution.

1.2 Policy Recommendations

For the European Union

1. **Mandate Harmonized Indicators and Definitions**
   - Enforce use of standardized definitions and reporting structures for energy poverty across Member States.
2. **Strengthen Local Delivery Capacity**
   - Expand technical assistance through **EPAH and SCF** for municipalities and NGOs working on the ground.
3. **Link Climate and Social Goals More Explicitly**
   - Ensure all EU energy and climate instruments have built-in safeguards and priorities for vulnerable groups.
4. **Prioritize Structural Investments Over Temporary Relief**
   - Incentivize long-term solutions like deep renovations, not just price control or income support.

For Slovenia

1. **Scale Outreach and Simplify Access**
   - Increase awareness and reduce administrative complexity to make Eco Fund and ENSVET services more accessible to the most vulnerable.
2. **Link Social and Energy Instruments More Systematically**
   - Enable automatic qualification for energy aid based on social assistance eligibility to ensure no one falls through the cracks.
3. **Support Deep and Repeat Renovations**
   - Transition from one-time grants to **multi-phase support models**, especially for households in poor structural conditions.
4. **Invest in Regional Hubs and Community Energy**
   - Expand the Luče pilot model and advisory centers to more regions, with special focus on coal-dependent areas.

For Hungary

1. **Adopt an Official Energy Poverty Definition and Action Plan**
   - This would enable the development of targets, tracking mechanisms, and coordinated programming.
2. **Shift from Reactive Subsidies to Structural Reforms**
   - Gradually move away from utility price caps and invest more in **housing renovation and efficiency** for vulnerable groups.
3. **Develop a Centralized Data and Monitoring System**
   - Use geo-spatial and household data to map vulnerability and inform targeted interventions.

4. **Foster Integration Across Sectors**
    - Better coordinate energy, housing, and social policy to build cross-cutting instruments—especially for rural and Roma populations.
5. **Use EU Funds More Strategically**
    - Leverage EEEOP+ and RRF not just for infrastructure, but for inclusive, **community-led energy solutions** in high-poverty areas.

2. Introduction

2.1 Definition of Energy Poverty

Energy poverty in the European Union (EU) refers to the condition where individuals or households are unable to afford essential energy services, such as heating, cooling, and lighting, necessary for maintaining a decent standard of living. This issue predominantly affects vulnerable groups, including low-income households, elderly individuals, and those living in poorly insulated homes. As of recent data, over 42 million EU residents struggle to keep their homes adequately warm, underlining the widespread nature of the problem. [1] [2]

The EU's response to energy poverty has been proactive, integrating it into broader climate and social policies. Key initiatives include the Clean Energy for All Europeans package and the Just Transition Mechanism, which aim to support socially equitable energy transitions. Member states are required to address energy poverty through their National Energy and Climate Plans (NECPs). Tools like the Energy Poverty Observatory and its successor, the Energy Poverty Advisory Hub, provide critical frameworks and indicators to assess and tackle energy poverty effectively across member states. [1] [3]

The complexity of energy poverty stems from its multifaceted nature, driven by high energy prices, inadequate energy efficiency, and socioeconomic disparities. Addressing these factors requires an integrated approach, focusing on improving housing insulation, regulating energy markets, and offering targeted financial support to affected populations. These efforts not only aim to alleviate immediate hardships but also contribute to long-term goals of sustainability and resilience in the EU energy sector. [1] [3]

2.2 Scope of the Report

At the project level, resources will be collected as a basis for reviewing instruments in the fight against energy poverty. We will focus on instruments adopted by either Slovenian or Hungarian authorities, or the European Commission. This segment will also include an in-depth analysis of good practice examples at the EU level related to energy poverty. Particular emphasis will be placed on the effectiveness of individual measures and the long-term applicability of the instruments.

An assessment of the capitalization and transfer of individual instruments to the cross-border region, in connection with the indicators from deliverable D.1.3.1, will also be meaningful. This activity will provide a systematic review of instruments in different areas and from various decision-makers. Important data will be documented, particularly the financing by decision-makers and the capitalization of the approach in the cross-border region.

The prepared review will also serve as a basis for for the following workpackage – Concept of prevention and elimination of energy poverty with recommendations for decision makers. Interesting findings or examples of good practices will be communicated to decision-makers through two short presentations prepared for this purpose. A comparative analysis of regional, national, and EU instruments in the fight against energy poverty will be prepared in English.

2.3 Structure of the Report

The report is designed to comprehensively address energy poverty through a multi-level analysis of regional, national, and EU instruments, culminating in actionable insights and recommendations. The following is a breakdown of the report structure:

1. Executive Summary

- **Key Findings**: Highlights the most critical insights derived from the analysis, providing a concise overview of the state of energy poverty and current instruments.
- **Policy Recommendations**: Summarizes actionable suggestions aimed at addressing gaps and enhancing the effectiveness of instruments.

2. Introduction

- **Understanding Energy Poverty**: Defines the concept, its implications, and its relevance in the current socio-economic and environmental context.
- **Scope and Purpose of the Analysis**: Explains the objectives of the report and the rationale behind examining instruments across regional, national, and EU levels.

3. Energy Poverty in Context

- **Causes and Effects**: Discusses the root causes of energy poverty and its impacts on individuals, communities, and economies.
- **Indicators for Measurement**: Introduces methodologies and metrics used to assess the prevalence and severity of energy poverty.

4. Regional Instruments

- **Overview of Regional Approaches**: Describes strategies employed at the regional level to combat energy poverty.
- **Examples and Best Practices**: Showcases successful initiatives and innovative practices from specific regions.
- **Challenges at the Regional Level**: Identifies obstacles faced by regional efforts, such as resource limitations and policy misalignment.

5. National Instruments

- **Strategies Across Countries**: Explores the diversity of approaches taken by various nations to address energy poverty.
- **Case Studies of National Initiatives**: Provides detailed examples of national programs, highlighting their design and impact.
- **Successes and Limitations**: Evaluates the effectiveness of these programs and identifies areas for improvement.

6. EU Instruments

- **EU Policies and Legal Frameworks**: Outlines the overarching policies, directives, and regulations enacted by the European Union.
- **Key EU Programs and Initiatives**: Details prominent EU-level initiatives aimed at mitigating energy poverty.

7. Comparative Analysis

- **Key Similarities and Differences**: Compares instruments across regional, national, and EU levels, emphasizing shared features and unique characteristics.
- **Effectiveness Across Levels**: Evaluates the relative success of initiatives in addressing energy poverty.
- **Lessons Learned**: Extracts insights from the comparative analysis to inform future strategies.

8. Coordination and Integration

- **Aligning Regional, National, and EU Instruments**: Discusses how different levels of intervention can work together cohesively.
- **Opportunities for Policy Synergy**: Highlights potential areas where collaboration can amplify impact.

9. Future Directions

- **Emerging Trends and Innovations**: Explores cutting-edge approaches and technologies that could shape future interventions.

- **Recommendations for Strengthening Instruments**: Proposes strategies to enhance the effectiveness and sustainability of energy poverty measures.

10. Conclusions

- **Summary of Findings**: Recaps the key insights and outcomes of the analysis.
- **Final Recommendations**: Presents a consolidated list of actionable recommendations for policymakers and stakeholders.

11. References

- A comprehensive list of all sources and materials cited in the report to ensure transparency and credibility.

This structure ensures a logical flow, starting from an overarching summary and contextual foundation to a detailed exploration of instruments at various levels, culminating in integrative insights and forward-looking recommendations.

3. Energy Poverty: An Overview

3.1 Causes and Consequences of Energy Poverty

Energy poverty arises from a combination of economic, infrastructural, and policy-related factors, and it results in profound socio-economic and environmental consequences. Below is a detailed analysis:

Causes of Energy Poverty

1. **Economic Constraints**
   - Low household incomes, combined with high energy costs, force families to make trade-offs between energy and other necessities like food and healthcare.
   - Fluctuating energy prices, influenced by global markets or regional dependencies, exacerbate this challenge.
     References: Studies by the European Commission and the International Energy Agency highlight the strong correlation between income levels and energy access [1] [2]

2. **Inefficient Infrastructure**
   - Poorly insulated housing and outdated appliances result in higher energy demands for heating and cooling, disproportionately affecting low-income households.
     References: The EU Energy Poverty Observatory emphasizes the role of energy-inefficient buildings in perpetuating energy poverty [3]

3. **Energy Market and Policy Failures**
   - Lack of consumer protection mechanisms, insufficient subsidies for low-income households, and high dependency on fossil fuels contribute to energy inaccessibility.
     References: Policy reviews by the European Parliament identify gaps in energy market regulation as a major cause [1] [2]

4. **Geographic and Climate Factors**

- Harsh climates significantly increase heating or cooling needs. Rural or remote areas may also face infrastructural inadequacies, such as unreliable electricity grids.
  References: Research from academic journals on energy poverty in Europe documents the geographic disparities in access to energy [3]

5. **Societal Vulnerabilities**
   - Elderly individuals, single-parent households, and marginalized communities are more susceptible to energy poverty due to socio-economic disadvantages.
     References: Reports by NGOs and think tanks like Friends of the Earth Europe highlight these demographic disparities [2] [3]

Consequences of Energy Poverty

1. **Health Impacts**
   - **Physical Health:** Cold homes and inadequate ventilation lead to respiratory and cardiovascular diseases, while reliance on polluting fuels contributes to indoor air pollution.
   - **Mental Health:** Energy poverty is associated with stress, depression, and anxiety.
     References: Health studies linked to the EU Energy Poverty Observatory detail these impacts [1] [2]

2. **Educational and Social Inequality**
   - Children in energy-poor households face challenges in maintaining a conducive learning environment, affecting their academic performance and future prospects.
   - Energy poverty perpetuates social inequalities by disproportionately affecting vulnerable demographics.
     References: European Commission reports emphasize the societal costs of energy poverty [2] [3]

3. **Economic Strain**
   - Households with limited energy access experience reduced disposable income, which impedes long-term investments in education, healthcare, or energy-efficient upgrades.

- Public costs, such as increased healthcare expenditure, burden governments and delay broader economic progress.
  References: International Energy Agency research links energy poverty with systemic economic challenges [1]

  .

4. **Environmental Impacts**
   - Energy-poor households often rely on polluting fuels (e.g., coal or wood), increasing local air pollution and greenhouse gas emissions.
   - These behaviors hinder national and global sustainability goals.
     References: Climate action reports from the EU highlight the environmental trade-offs of inadequate energy access [3]

5. **Energy Insecurity**
   - Disconnection risks and reliance on subpar energy sources lead to intermittent energy access, compounding societal and individual instability.
     References: Policy analyses show the cascading effects of energy insecurity on social cohesion and economic resilience [1] [2]

Addressing these causes and mitigating the consequences requires an integrated approach involving policy reforms, technological solutions, and targeted social support.

3.2 Indicators and Metrics for Measuring Energy Poverty

Energy poverty represents a complex and multi-dimensional phenomenon, making its measurement challenging but essential for evidence-based policymaking. To effectively address energy poverty, it is crucial to define the concept clearly and establish robust indicators to monitor and evaluate its extent and impact. This chapter explores the primary indicators and metrics utilized to measure energy poverty, highlighting their applications and limitations.

The 2023 Social Climate Fund regulation and the revised Energy Efficiency Directive define energy poverty as "a household's lack of access to essential energy services that provide basic levels and decent standards of living and health, including adequate heating, hot water, cooling, lighting, and energy to power appliances, in the relevant national context." This lack is typically caused by a combination of non-affordability, insufficient disposable income, high energy expenditures, and poor energy efficiency of homes. [4]

Building on this definition, the European Union (EU) and its Member States recognize the necessity of indicators to evaluate energy poverty and to ensure appropriate interventions at national and local levels. [4]

Primary Indicators

Energy poverty is multi-dimensional and cannot be encapsulated by a single metric. The Energy Poverty Advisory Hub (EPAH) and the EU Energy Poverty Observatory (EPOV) have outlined several primary indicators that offer insights into the prevalence and severity of energy poverty. These include:

1. **Inability to Keep Homes Adequately Warm**:
    - Data from Eurostat and surveys assess the proportion of households unable to maintain adequate indoor temperatures during colder months.
    - This indicator is significant for identifying regions and demographic groups disproportionately affected by cold-related energy poverty.
2. **Arrears on Utility Bills**:
    - The share of the population at risk of poverty with overdue payments for energy services reflects economic stress and affordability issues.
    - Persistent arrears highlight systemic challenges in energy pricing and social support.
3. **High Energy Expenditure as a Share of Income**:
    - Households spending an excessive proportion of their income on energy services (twice the national median share) are identified as experiencing energy poverty.
    - This metric is particularly relevant for comparing disparities between income groups.
4. **Low Absolute Energy Expenditure**:
    - Households whose energy expenditures fall below half the national median may indicate either high energy efficiency or suppressed energy consumption due to affordability constraints.

Complementary Indicators

In addition to the primary indicators, complementary metrics provide broader context to energy poverty. These include:

- **Housing Quality Metrics**:
    - Proportion of the population living in dwellings with leaks, damp, rot, or inadequate insulation.
    - Indicates the structural inefficiencies contributing to high energy costs and poor living conditions.
- **Energy Prices for Consumers**:
    - Data on electricity and gas prices segmented by consumption bands.

  - Assesses the affordability of energy in different economic contexts.
- **Risk of Poverty Metrics**:
  - Share of the population below 60% of national median income, with specific focus on energy expenses.
  - Links general economic vulnerability with energy poverty risks.
- **Seasonal Impacts**:
  - Indicators that account for summer and winter energy poverty, such as access to cooling solutions in warmer climates.

Composite Indices and Advanced Metrics

Recognizing the limitations of single indicators, composite indices, such as the European Domestic Energy Poverty Index (EDEPI), offer an aggregated view. EDEPI includes:

1. Share of energy expenditures as a proportion of total income.
2. Share of low-income households unable to maintain comfortable indoor temperatures in winter and summer.
3. Proportion of low-income households living in substandard housing.

These indices allow cross-country comparisons and help policymakers target regions or populations at higher risk of energy poverty.

Applications and Limitations

Applications:

- Indicators and metrics guide the development and evaluation of policies such as social energy tariffs, energy efficiency subsidies, and renovation initiatives.
- Localized data support community-specific interventions, ensuring that vulnerable populations receive targeted support.

Limitations:

- Data Availability:
  - Time lags in data collection (e.g., EU-SILC, Eurostat) reduce the immediacy of policy interventions.
- Subjective vs. Objective Measures:
  - Self-assessed metrics (e.g., perceived ability to keep warm) may differ from quantitative measures, leading to inconsistencies.
- Geographical and Seasonal Variations:
  - Differences in climate, housing stock, and energy systems require tailored approaches, complicating comparisons.

Future Directions

The EU and its Member States must continue refining energy poverty indicators to address emerging challenges, such as:

- Integrating real-time data from smart energy meters to improve timeliness and accuracy.
- Harmonizing definitions and methodologies across countries to enable better comparisons.
- Developing indicators for emerging forms of energy poverty, including transport and digital access.

Efforts to address energy poverty should also leverage advancements in geospatial analytics and machine learning to predict and mitigate risks in vulnerable communities.

By adopting a diverse set of indicators and continuously refining them, policymakers can better understand and combat energy poverty, ensuring that the transition to a sustainable and climate-neutral economy is both equitable and inclusive.

4. EU Instruments

Energy poverty, defined as the lack of access to adequate and affordable energy services, is a pressing issue in the European Union (EU). Millions of households struggle to afford heating, cooling, and electricity, which affects health, well-being, and social inclusion. To address this challenge, the EU has implemented several instruments and policies aimed at reducing energy poverty and promoting energy efficiency.

One key instrument is the **Clean Energy for All Europeans package** (European Commission, 2019), which includes directives on energy efficiency, renewable energy, and electricity market reforms. The **Energy Efficiency Directive (EED) (Directive (EU) 2018/2002)** mandates Member States to adopt measures that improve energy efficiency, particularly for vulnerable consumers. Additionally, the **Renewable Energy Directive (RED II) (Directive (EU) 2018/2001)** encourages the use of decentralized renewable energy solutions to empower consumers and lower energy costs.

The **Social Climate Fund (SCF)**, established under the European Green Deal (European Commission, 2021), is another crucial initiative. This fund provides financial support to low-income households, micro-enterprises, and vulnerable communities to help them transition to cleaner energy sources and improve home insulation, reducing energy bills.

Moreover, the **EU Energy Poverty Observatory (EPOV)** (European Commission, 2020) serves as a platform to collect data, share best practices, and provide policy recommendations. By enhancing awareness and knowledge, EPOV supports national governments in designing effective strategies to combat energy poverty.

Another significant measure is the **Just Transition Mechanism (JTM) (Regulation (EU) 2021/1056)**, which ensures that communities dependent on fossil fuels receive support to shift toward sustainable energy without exacerbating economic inequalities. The mechanism includes financial aid, job training, and infrastructure investments to facilitate a fair and inclusive transition.

At the national level, the EU encourages Member States to develop **National Energy and Climate Plans (NECPs) (Regulation (EU) 2018/1999)** that incorporate specific actions to address energy poverty. These plans promote initiatives such as energy subsidies, efficiency programs, and social tariffs to protect vulnerable consumers.

In conclusion, the EU employs a multi-faceted approach to tackling energy poverty through legislation, financial support, and knowledge-sharing platforms. These instruments aim to ensure that all Europeans have access to affordable, sustainable, and secure energy, contributing to a more inclusive and equitable energy transition.

4.1 EU Policies and Legal Framework

The European Union has established a robust legal and policy framework to address energy poverty while ensuring sustainability, security, and affordability in energy access. These policies aim to create a fair energy transition, protect vulnerable consumers, and enhance energy efficiency.

The **Energy Union Strategy** (European Commission, 2015) serves as a cornerstone of EU energy policy, emphasizing five dimensions: energy security, internal energy market, energy efficiency, decarbonization, and research & innovation. It promotes a fully integrated and resilient energy system that reduces dependency on external energy sources while ensuring fairness for all consumers.

The **European Pillar of Social Rights** (European Commission, 2017) reinforces the EU's commitment to social protection, including the right to access essential services such as energy. This principle is translated into national-level measures to prevent energy disconnections and ensure support for low-income households.

The **Electricity Market Directive (Directive (EU) 2019/944)** within the **Clean Energy for All Europeans package** introduces safeguards to prevent consumer disconnections and mandates Member States to define and monitor energy poverty. It also enhances transparency in energy pricing and strengthens consumer rights, including protections against unfair pricing practices.

Furthermore, the **Fit for 55 Package** (European Commission, 2021), part of the European Green Deal, strengthens the EU's climate and energy policies by increasing renewable energy targets and enhancing emissions trading mechanisms. The **Emissions Trading System (ETS) reform (Directive (EU) 2023/959)** ensures that revenues from carbon pricing are reinvested in social measures, such as funding energy efficiency upgrades for vulnerable households.

The **Regulation on Trans-European Energy Networks (TEN-E) (Regulation (EU) 2022/869)** supports the development of cross-border infrastructure to improve energy access and affordability across the EU. It prioritizes projects that enhance energy interconnection and reduce regional disparities in energy availability.

Overall, the EU's policy and legal framework are structured to foster a just energy transition, ensuring that no one is left behind. By integrating energy policy with social protections, the EU is making strides toward eliminating energy poverty while achieving climate goals.

4.2 Key EU Programs and Initiatives

To implement its energy poverty policies effectively, the EU has launched several programs and initiatives that provide financial aid, technical assistance, and research support. These initiatives aim to empower households, communities, and businesses to transition toward sustainable and affordable energy solutions.

The **Social Climate Fund (SCF) (Regulation (EU) 2023/955)** is a flagship program aimed at supporting low-income households, vulnerable consumers, and small businesses affected by the energy transition. It provides direct financial aid, facilitates energy efficiency improvements, and supports investments in clean energy technologies.

The **LIFE Clean Energy Transition Program** (European Commission, 2022) finances projects that promote energy efficiency, clean energy innovations, and sustainable consumer practices. This initiative also supports local governments in developing targeted energy poverty alleviation measures.

Another critical initiative is the **Horizon Europe Research and Innovation Program** (Regulation (EU) 2021/695), which funds projects that explore innovative solutions for energy efficiency, smart grids, and affordable renewable energy. This program promotes technological advancements that reduce energy costs and improve access to sustainable energy.

The **European Regional Development Fund (ERDF) (Regulation (EU) 2021/1058)** and the **Cohesion Fund (Regulation (EU) 2021/1056)** provide financial assistance for energy infrastructure improvements in underdeveloped regions. These funds are essential for modernizing energy networks, increasing renewable energy adoption, and reducing reliance on fossil fuels.

Additionally, the **Just Transition Fund (JTF) (Regulation (EU) 2021/1056)** supports regions heavily dependent on coal and other fossil fuels by financing retraining programs, green job creation, and infrastructure investments. This initiative ensures that workers and communities are not left behind during the shift to sustainable energy sources.

The **Energy Poverty Advisory Hub (EPAH)** (European Commission, 2021) provides technical support and knowledge-sharing opportunities for local and national governments. By connecting stakeholders and promoting best practices, the EPAH enhances the effectiveness of energy poverty reduction measures across the EU.

Through these key programs and initiatives, the EU is actively working toward eliminating energy poverty, increasing energy efficiency, and promoting social fairness in the energy transition. These efforts contribute to a more inclusive, sustainable, and resilient European energy landscape.

4.3 Comparison of Energy Poverty Instruments at EU, National, and Regional Levels

Instrument	Level	Objective	Key Measures	Funding Source	Relevant Regulation/Directive
Clean Energy for All Europeans Package	EU	Promote clean energy and energy efficiency	Directives on renewable energy and energy market reforms	EU Budget	Directive (EU) 2018/2001, 2018/2002
Social Climate Fund (SCF)	EU	Support vulnerable consumers in energy transition	Financial aid, home insulation, clean energy subsidies	EU Budget, ETS revenues	Regulation (EU) 2023/955
Just Transition Mechanism (JTM)	EU	Support regions transitioning away from fossil fuels	Financial aid, job training, infrastructure investments	EU Budget, private investments	Regulation (EU) 2021/1056
National Energy and Climate Plans (NECPs)	National	Set national strategies for energy transition	Subsidies, efficiency programs, social tariffs	National budgets	Regulation (EU) 2018/1999
Local Energy Poverty Action Plans	Regional	Address energy poverty at community level	Targeted subsidies, awareness campaigns	Regional budgets, EU co-funding	National/Regional legislation

Through these key programs and initiatives, the EU is actively working toward eliminating energy poverty, increasing energy efficiency, and promoting social fairness in the energy transition.

5. National Instruments

Table structure for overview of national instruments

Instrument	
Level	National / regional / EU
Objective	
Key measures	
Target Groups	
Funding Sources	
Monitoring & Evaluation	
Relevant Regulation/Directive	

5.1 Slovenia

In the field of energy poverty reduction, the Action Plan outlines two long-term targets for 2030, aligned with the National Energy and Climate Plan:

- Primary Target: Reduce the proportion of energy-poor households to between 3.8% and 4.6% by 2030.
- Secondary Target: Achieve a minimum of 3,500 investments in energy efficiency (EE) and renewable energy (RES) measures in energy-poor households, building on the existing ZERO500 programme.

In addition, short-term targets are set for 2026, focusing on the expansion of incentives for energy-poor households to accelerate progress in reducing energy poverty.

5.1.1 National Strategies and Frameworks

Slovenia, like Hungary and many other EU member states, has recognized energy poverty as a significant economic ans social issue. Slovenia has developed several national strategies, mostly aligned with EU energy policy, the European Green Deal, and its own national energy and climate objectives, highlighting the key governmental and legislative efforts to tackle this issue at a strategic level:

The main **strategies** addressing energy poverty in Slovenia are:

- **National Energy and Climate Plan (NECP 2021-2030) – Slovenia**

The NECP is a strategic document laying down the objectives, policies and measures for Slovenia on the five dimensions of the Energy Union for the period up to 2030 (with a view to 2040):

- decarbonisation (greenhouse gas emissions (GHG) and renewable energy sources (RES)),
- energy efficiency,
- energy security,

- the internal energy market and research, and
- innovation and competitiveness.

The key objectives for the 2030 identified in the NEPN are:

- reducing the total greenhouse gas emissions by 36%,
- at least a 35% improvement in energy efficiency, which is higher than the target adopted at EU level (32.5%),
- at least a 27% share of renewable energy sources; due to the relevant domestic circumstances, Slovenia had to agree to a lower target than that of the EU (32%), but will strive to increase this ambition in the next NEPN update (2023/24),
- and last but not least, 3% of GDP to be spent on R&D, of which 1% of GDP will be public funds

In NEPN energy poverty is explicitly recognized as a critical social issue and includes goals to:

- Identify and monitor energy-poor households.
- Develop indicators and tools to measure energy poverty.
- Promote building renovations and energy efficiency for low-income households.

- **Slovenian National Development Strategy 2030**

The Slovenian Development Strategy 2030 is the basis for the comprehensive process of medium-term planning, which foresees the definition of priority tasks and measures which must be designed so that they take fiscal policy into account. It is a multi-sectoral national strategy with the primary objective of providing a high-quality life for all, achieved through balanced economic, social and environmental development which takes account of the planet's limitations and creates conditions and opportunities for present and future generations. One of the strategic orientation for a high quality of life is a well-preserved natural environment achieved through strategy's development goals of a low-carbon circular economy and sustainable natural resource management.

The Slovenian Development Strategy 2030 is a high-level document that sets overarching goals, including the reducing of social inequalities, of which energy poverty is a component and the encoragement of a just and an inclusive energy transition.

- **Slovenian long-term Strategy for energy renovation of buildings (LTRS) – to 2050**

The goal of the Long-Term Renovation Strategy (2021) (DSEPS 2050) is to have the energy systems of 74% of single-family houses and 91% of multi-family houses renovated by 2050. This will reduce final energy consumption by 45%, and CO2 emissions by almost 75% compared to 2005.

The Strategy aims to decarbonize the national building stock by mid-century, focuses on:

- Targeted renovations for energy-poor households.
- Prioritizing social housing and vulnerable groups.
- Financial mechanisms to support deep energy renovations.

The Strategy is supported by EU and national funds (e.g., Eco Fund subsidies).

- **Slovenian National Just Transition Plan (2021–2027)**

The Just Transition Plan (JTP) is Slovenia's roadmap for managing the social, economic, and environmental impacts of transitioning to a low-carbon economy — specifically in regions dependent on coal and carbon-intensive industries.
It is developed as part of the EU's Just Transition Mechanism, with financial support from the Just Transition Fund (JTF). Slovenia is allocated approximately €258 million under this mechanism and is co-financed by national and regional funds.
The Plan addresses energy poverty through:

- Renovation of housing stock, especially for low-income and vulnerable households.
- Energy efficiency programs tailored for coal regions.
- Subsidies and advisory services to help citizens access clean energy.
- Promotion of community energy initiatives and citizen-led energy cooperatives.

For the period 2024-2026, €33.8 million is foreseen for the implementation of the *Action Plan to reduce energy poverty*[1], of which:

- 27,0 € million for EE and RES investment measures
- 5.0 € million for the integration of the energy poor into energy communities and
- 1.8 € million for the operation of a project office with regional advice points and an informal network for information and awareness-raising.

5.1.2 Case Studies of National Initiatives

For the period until the end of 2026, the main sources of funding are the Climate Change Fund (around €24 million) and the European Regional Development Fund (around €15 million) with the help of different support organisations:

- **Slovenian Environmental Public Fund's (Eco Fund)[2]**

Eco Fund, Slovenian Environmental Public Fund (Eco Fund), was established in 1993. Its main purpose is to promote development in the field of environmental protection by offering financial incentives such as soft loans and grants for different environmental investment projects. It began with soft loans for investments in environmental protection as a revolving fund. Perhaps the most significant aspect of Eco Fund's operating environment is the requirement that Eco Fund maintains the real value of its assets. For this reason, Eco Fund has provided support to environmental investments through soft loans and developed a strong focus on the financial sustainability of the projects it supports. In 2008, Eco Fund was granted the use of additional financial mechanisms such as grants to support environmental investments. Grants are financed mostly by fees paid by end users of energy and funds from the climate change fund (revenues from CO_2 allowances).

[1] Source: https://www.energetika-portal.si/podrocja/energetika/energetska-revscina/akcijski-nacrt-za-zmanjsevanje-energetske-revscine/
[2] Source: https://www.ekosklad.si/english

In order to reach its goals, Eco Fund prepares and carries out yearly plans which serve as a basis for the publishment of public calls. Should they wish to receive a grant or a soft loan, the eligible person must send an application for a grant and/or soft loan. Since the beginning in 2008, the number of applications that Eco Fund that receives keeps rising. Eco Fund's subsidies have had a positive effect on tax revenues, diminishing of grey economy, new green jobs, sustainable development of the construction planning and business, as well as on the development of the use of strategic resources such as wood. These effects which simultaneously contribute to the fight against the environmental crisis, on the one hand, and benefit the economy, on the other, point to a positive role of Eco Fund in the process of green growth and development in Slovenia.

A few years ago, Eco Fund has taken over the organization and financing of free energy advisory network offering free expert advice on how to improve energy efficiency to households. It has also taken over part of the task of energy poverty reduction by covering the entire cost of several environmental investments of households struggling with energy poverty. Currently, Eco Fund is facing new challenges such as adapting financial incentives to meet new demands of national strategies that set additional tasks for Eco Fund: more deep energy renovations vis-à-vis shallow renovations, higher number of required renovations, stimulation of the remaining, unrefurbished building stock, energy poverty reduction, development of innovative financial instruments etc.

- **The Slovenian Red Cross**[3]

The Slovenian Red Cross as an independent national society grew from the insights, will, efforts and work of numerous generations of the Red Cross members in Slovenia. Among almost one hundred humanitarian organizations in Slovenia, the Slovenian Red Cross is the most recognizable. One of the important pillars of the Slovenian Red Cross reputation is an intact tradition of the International Red Cross and Red Crescent Movement and consistent implementation of the Fundamental Principles: humanity, impartiality, neutrality, independence, voluntary service, unity and universality.

Furthermore, the amazing results that no other humanitarian organization in Slovenia can achieve in such a large scope and reach speak for itself. The Slovenian Red Cross irreplaceable contribution towards health and prosperity of Slovenians is vividly shown in implementation of public programs such as: Blood Donation; First Aid; Disaster Preparedness and Disaster Response and in strong Social Welfare activities.

Since 2014 the SRC partners in implementation of the Fund for European Aid to the most Deprived (FEAD) in Slovenia not only by offering assistance to people living in poverty and social exclusion but also by implementing accompanying measures that can play the critical role in addressing the social exclusion. SRC provides support in different ways, depending on the specific needs of the person. Activities range from basic material assistance such as food, clothing and shelter, to advice and counselling regarding family, social, health or legal issues, as well as support in accessing services and employment, housing and social care. Quite often, it is a combination of different services.

- **Caritas Slovenia**[4]

[3] Source: https://www.rks.si/sl/About_Slovenian_Red_Cross/
[4] Source: https://www.caritas.org/

Founded in 1990 Caritas Slovenia implements social welfare programmes in Slovenia and works on developmental programmes abroad in countries in Asia, Europe and sub-Saharan Africa. Their domestic social welfare programmes support substance abuse prevention and rehabilitation, raise public awareness about the impact of climate change, establish maternity homes, homeless clinics for people without health insurance and offer assistance to victims of trafficking. Overseas, their development projects include health programmes such as malaria prevention, HIV/AIDS education centres, career training and capacity building programmes, educational workshops, safe and secure water provision and care for disabled children and young people.

In 2012 Caritas Slovenia provided material assistance to over 126,400 people in need across Slovenia. The material aid distributed included 3,317 tons of food, clothing, payment orders to over 17,260 people and school supplies such as workbooks to 11,283 children. Their social welfare programmes provided assistance to victims of human trafficking, maternity homes to 176 women and children, drug rehabilitation to 179 drug addicts and provided health care for 1,050 homeless people.

- **Center for Social Work**

There is no social services legislation in Slovenia; instead, the Social Assistance Act determines that social welfare involves preventing and solving the social problems of individuals, families and communities.

Article 2 of the Social Assistance Act determines that the state ensures the functioning of social welfare organisations, creates the conditions for the development of social welfare activities, supports and encourages the development of self-help charities, different types of independent living for people with disabilities and other forms of voluntary work in the field of social welfare. Furthermore, Article 2 determines that the social welfare programme is adopted by the National Assembly of Slovenia and regulates the strategy of social assistance development, defines the priority areas of social assistance, addresses the specific needs and opportunities of each area, and determines the network of public services provided by the state.

The Resolution on the 2022-2030 National Social Assistance Programme was adopted by the National Assembly of Slovenia in 2022. It recognises the obligation of the State to describe social services in a strategic plan. Based on the resolution, National Action Plans are adopted for shorter periods within this 8-year timeline. The key goals of the Plans are to reduce the risk of poverty and increase social inclusion, improve the availability and variety of social services, ensure the accessibility and reach of social services and programmes, and lastly, establish the conditions for social welfare organisations to operate, and to strengthen social care development and quality.

In Slovenia, the instruments listed and described below help reduce the energy burden on the population and support energy efficiency investments.

Instrument	Public call ZER 2024 - Non-repayable funds for reducing energy poverty (Eco Fund)[5]
Level	National - Slovenian Environmental Public Fund (Eco Fund)
Objective	The call aims to reduce energy poverty in energy-poor households. Objectives of the call are to: • increase the energy efficiency of buildings, • increase the use of renewable energy sources, • improve the living conditions, health and social status of all household members, • contribute to the reduction of air pollution and thus improve ambient air quality; and • raise awareness among citizens of the importance of energy efficiency measures and the use of renewable energy sources.
Key measures	The subject of the call for proposals are non-repayable financial incentives for energy-poor households for investments in measures to increase the energy efficiency of buildings and the use of renewable energy sources in the territory of the Republic of Slovenia in one- or two-apartment buildings or in apartments in multi-apartment buildings.
Target Groups	The ZER 2024 call is open to those who are at least half owners of residential buildings or apartments, who are materially deprived and who live in buildings that are in a really bad state of repair and in need of energy renovation.
Funding Sources	Eco Fund's main goal is to help Slovenia achieving national environmental goals in the field of RES and RUE. It is financed through various state and EU programs. Its main funding source initially came from environmental taxes — particularly fees for air pollution and other environmental burdens. Over time, the Eco Fund's resources have been supplemented by EU funds, budgetary contributions, and revenue from repayments of loans it has granted for eco-friendly projects.
Monitoring & Evaluation	Eco Fund itself are responsible for reviewing documentation, checking compliance, and conducting random or targeted site visits.
Relevant Regulation/Directive	• Environmental Protection Act (Zakon o varstvu okolja – ZVO-2), • Regulation on Energy Efficiency (Uredba o energetski učinkovitosti), • EU Directive 2018/2001 (RED II – Renewable Energy Directive), • Regulation (EU) 2021/241 — Recovery and Resilience Facility (RRF),

[5] Source: https://www.ekosklad.si/prebivalstvo/pridobite-spodbudo/zmanjsevanje-energetske-revscine

- National Energy and Climate Plan of Slovenia (NEPN)

Instrument	Free advice service at home (ENSVET)[6]
Level	National - Slovenian Environmental Public Fund (Eco Fund)
Objective	The ENSVET network in Slovenia — officially called Eko svetovalna mreža ENSVET — is a national Eco-Counseling Network coordinated by the Eco Fund (Eko sklad). Its main objectives are: • Provide Free Eco-Consulting, • Promote Energy Renovations, • Support National and EU Climate Goals, • Raise Public Awareness, • Assist with Applications for Eco Fund Subsidies and • Monitor the Impact of Eco Measures ENSVET acts as a bridge between citizens and the Eco Fund, making it easier for people to take part in Slovenia's transition to a low-carbon, energy-efficient society.
Key measures	The key measures of the ENSVET network (Slovenia's national Eco-Counseling Network) include: • Free Individual Counseling on Energy Efficiency and Renewable Energy, • Support for Eco Fund Subsidy Applications, • Energy Performance Assessments of Buildings, • Promotion of Renewable Energy Sources, • Organizing Public Information Events and Workshops, • Energy Poverty Reduction, • Monitoring and Reporting and • Promoting Best Practices and Innovations ENSVET doesn't only advise — it actively helps implement Slovenia's green transition by guiding people toward real, funded environmental upgrades.
Target Groups	The consultation is open to all interested private persons, legal and public sector entities. Citizens who receive emergency social assistance or cash social assistance and/or a protection allowance can register for a free home visit from an energy advisor with a social worker at the Social Work Centre or on the Eco Fund´s website.
Funding Sources	Eco Fund's main goal is to help Slovenia achieving national environmental goals in the field of RES and RUE. It is financed through various state and EU programs. Its main funding source initially came from environmental taxes — particularly fees for air pollution and other environmental burdens. Over time, the Eco Fund's resources have been supplemented by EU

[6] Source: https://www.ekosklad.si/prebivalstvo/zmanjsevanje-energetske-revscine

	funds, budgetary contributions, and revenue from repayments of loans it has granted for eco-friendly projects.
Monitoring & Evaluation	Eco Fund itself are responsible for reviewing documentation, checking compliance, and conducting random or targeted site visits.
Relevant Regulation/Directive	• Regulation on Energy Efficiency (Uredba o energetski učinkovitosti), • EU Directive 2018/2001 (RED II – Renewable Energy Directive), • Regulation (EU) 2021/241 — Recovery and Resilience Facility (RRF), • National Energy and Climate Plan of Slovenia (NEPN)

Instrument	**Emergency electricity supply for vulnerable customers (Slovenian Energy Agency)**[7]
Level	National - The Energy Agency is the national energy regulator of the Republic of Slovenia
Objective	The objectives of »*Nujna oskrba*« (Emergency Supply) from the Slovenian Energy Agency are focused on ensuring energy security and protecting vulnerable consumers during crisis situations - ensure that people who are financially or socially vulnerable are not left without critical energy supply, especially during supplier bankruptcies, market disruptions, or extreme price shocks.
Key measures	The measures of this action are related to ensuring the minimum energy delivery to vulnerable customers/energy poor households. The system operator shall not disconnect a vulnerable customer or restrict the customer's consumption below the amount or the power that is strictly necessary under the circumstances (season, temperature conditions, place of residence, state of health and other similar circumstances) in order to avoid endangering the life and health of the customer and the persons residing with him/her.
Target Groups	A vulnerable customer is a household customer who, because of his/her financial situation, income and other social circumstances and living conditions, is unable to secure an alternative source of energy that would result in the same or lower costs for heating his/her dwelling or for the most essential household uses.
Funding Sources	The regulator's task is to create the conditions for the development of competition and to ensure that it operates in line with the requirements for sustainable, reliable and high-quality supply. In order to act in the interests of all market participants, the regulator must be politically and financially

[7] Source: https://www.agen-rs.si/gospodinjski/elektrika/ali-lahko-ostanem-brez-elektricne-energije/nujna-oskrba

	independent, which is why the Agency is not financed from the State budget but from network charges.
Monitoring & Evaluation	Operater sistema mora odjemalca pred odklopom obvestiti o možnosti nujne oskrbe, o dokazilih, ki jih mora odjemalec predložiti operaterju sistema, da mu operater sistema odobri nujno oskrbo, in o rokih, v katerih je treba ta dokazila predložiti.
Relevant Regulation/Directive	• Energy Act (Energetski zakon – EZ-1), • Decree on the Operation of the Electricity Market (Uredba o delovanju trga z električno energijo), • Decree on the Operation of the Natural Gas Market (Uredba o delovanju trga z zemeljskim plinom), • Rules on the Allocation of Suppliers of Last Resort (Pravila o dodeljevanju dobaviteljev v skrajni sili), • Electricity Directive (EU) 2019/944, • Regulation (EU) 2019/941 (Risk Preparedness in the Electricity Sector)

Instrument	**Financial social assistance (Ministry of Labour, Family, Social Affairs and Equal Opportunities)**[8]
Level	National - Ministry of Labour, Family, Social Affairs and Equal Opportunities
Objective	The financial social assistance is intended to help people meet their minimum subsistence needs. The citizens can claim it if their per capita income is below the legal income limit and they meet other conditions set by law.
Key measures	The key measure of the financial social assistance is to provide a monthly cash payment to individuals or families who do not have sufficient income to cover basic living needs (like food, housing, clothing, healthcare)
Target Groups	An indivudual who does not have enough money to live on, or enough savings and assets to support him or her. Also, if the person is unable to provide for himself or herself and his or her family members the minimum income for reasons beyond his or her control. The person must also be registered as unemployed or as an active jobseeker with the Employment Service of the Republic of Slovenia.
Funding Sources	In Slovenia, Financial Social Assistance is primarily financed by the state, specifically through the national budget or more precisely: • The Ministry of Labour, Family, Social Affairs and Equal Opportunities, • Funds for financial social assistance are allocated from the state budget and managed by the Centers for Social

[8] Source: https://www.gov.si/teme/denarna-socialna-pomoc/

	Work (Centri za socialno delo, CSD), which process applications and distribute the aid.
Monitoring & Evaluation	The Ministry of Labour, Family, Social Affairs and Equal Opportunities (MDDSZ) oversees the system.
Relevant Regulation/Directive	• Act on Exercising Rights from Public Funds (Zakon o socialnovarstvenih prejemkih - ZSVarPre), • Act on Exercising Rights from Public Funds (Zakon o uveljavljanju pravic iz javnih sredstev - ZUPJS), • Decree on Criteria for Determining the Amount of Financial Social Assistance (Uredba o merilih za določanje višine denarne socialne pomoči), In Slovenia, Financial Social Assistance is mainly regulated by national laws rather than by EU directives (since social assistance is a national competence under EU law).

Instrument	**Emergency social assistance (Ministry of Labour, Family, Social Affairs and Equal Opportunities)[9]**
Level	National - Ministry of Labour, Family, Social Affairs and Equal Opportunities
Objective	The financial social assistance is intended to help people meet their minimum subsistence needs. The citizens can claim it if their per capita income is below the legal income limit and they meet other conditions set by law.
Key measures	Emergency social assistance is intended to cover extraordinary living expenses that cannot be met from your own or your family's income. If, for reasons beyond their control, a person or family finds themselves in a situation of material deprivation, they can apply for emergency cash social assistance. In the application, the applicant must specify the purpose for which he or she needs the assistance and the amount of the resources required. The recipient of the emergency cash social assistance is obliged to use the aid received for the purpose for which it was granted.
Target Groups	Emergency social assistance is intended for people or families who, for reasons beyond their control, find themselves in a situation of material deprivation or who have extraordinary living expenses that they cannot cover from their income.
Funding Sources	In Slovenia, Financial Social Assistance is primarily financed by the state, specifically through the national budget or more precisely: • The Ministry of Labour, Family, Social Affairs and Equal Opportunities, • Funds for financial social assistance are allocated from the state budget and managed by the Centers for Social

[9] Source: https://www.gov.si/teme/denarna-socialna-pomoc/

	Work (Centri za socialno delo, CSD), which process applications and distribute the aid. • In some cases, municipalities can also contribute to complementary or emergency social assistance, but the core financial social assistance is a state responsibility.
Monitoring & Evaluation	The Ministry of Labour, Family, Social Affairs and Equal Opportunities (MDDSZ) oversees the system.
Relevant Regulation/Directive	• Act on Exercising Rights from Public Funds (Zakon o socialnovarstvenih prejemkih - ZSVarPre), • Act on Exercising Rights from Public Funds (Zakon o uveljavljanju pravic iz javnih sredstev - ZUPJS), • Decree on Criteria for Determining the Amount of Financial Social Assistance (Uredba o merilih za določanje višine denarne socialne pomoči), In Slovenia, Financial and Emergency Social Assistance is mainly regulated by national laws rather than by EU directives (since social assistance is a national competence under EU law).

Instrument	**Rent subsidies (Ministry of Labour, Family, Social Affairs and Equal Opportunities)[10]**
Level	National - Ministry of Labour, Family, Social Affairs and Equal Opportunities
Objective	The main objective of the subsity is to help people renting market housing, non-profit housing and residential units who do not have sufficient resources to cover the cost of the rent. The rent subsidy is determined between the non-profit rent and the established income, less the minimum income and 30 % of the established income. The subsidy shall be set at a maximum of 85 % of the non-profit rent.
Key measures	The Housing Rent Subsidy is a government measure aimed at reducing rental costs for low-income individuals and families. This measure allows tenants to reduce the financial burden associated with rent and contributes to more affordable housing in the country.
Target Groups	The right to a rent subsidy is for those who do not have sufficient resources to cover the cost of rent and who meet the income and asset conditions. Tenants in non-profit housing, purpose-built rented housing, residential units, market rented housing and owner-occupied housing may be eligible for a rent subsidy.
Funding Sources	In Slovenia, the funding sources for rent subsidies are:

[10] Source: https://www.gov.si/teme/subvencija-najemnine/

	• State Budget (managed through the Ministry of the Environment, Climate and Energy, which handles housing policy) • Municipal Budgets (in some cases; also co-finance rent subsidies or offer additional local rent subsidie) • Housing Fund of the Republic of Slovenia (Stanovanjski sklad RS – public found) • European Union Funds (co-financing for specific projects)
Monitoring & Evaluation	The monitoring of rent subsidies is mainly done by several public bodies, each responsible for a specific part: • Centers for Social Work (Centri za socialno delo – CSD), • Ministry of the Environment, Climate and Energy (MOPE) and • Municipalities (Občine) in some cases.
Relevant Regulation/Directive	• Housing Act (Stanovanjski zakon - SZ-1), • Rules on Awarding Rent Subsidies (Pravilnik o dodeljevanju subvencij najemnin), • Act on Exercising Rights from Public Funds (Zakon o uveljavljanju pravic iz javnih sredstev - ZUPJS), • Rules on Criteria for Allocation of Non-Profit Housing (Pravilnik o merilih za dodeljevanje neprofitnih stanovanj v najem)

5.1.3 Success Stories and Limitations

Slovenia has introduced a range of instruments — financial, technical, social, and regulatory — to tackle energy poverty. Some have shown strong results, particularly when backed by EU funding and NGO partnerships. Others face structural and operational limitations that restrict their reach and long-term impact.

The **Eco Fund, Slovenia's national environmental fund** (Financial Lifeline for Low-Income Households), plays a central role in helping low-income households reduce their energy bills. It offers grants and soft loans to support home energy renovations, such as insulating walls, replacing old windows, and installing efficient heating systems like heat pumps or wood biomass boilers.

Why it is a success:

- In recent years, the Eco Fund has introduced special subsidies for vulnerable groups, covering up to 100% of costs for qualified applicants.
- This has enabled hundreds of families, especially in rural areas, to move from cold, drafty homes heated with coal or wood to efficient and cleaner systems.

The **ENSVET network** (Energy Advisory Network: Free Expert Help) is a group of trained local energy advisors, funded through the Eco Fund. They provide free, in-home consultations to help households understand how to save energy, improve comfort, and apply for funding.

Why it it is a success:

- ENSVET advisors are local, understand regional needs, and explain technical concepts in everyday language.
- They help fill out applications, find contractors, and choose appropriate technologies — especially useful for elderly or less-educated households.

Where government procedures are slow or complicated, **NGOs** like the **Red Cross and Caritas** step in with immediate aid offering a fast and flexible support for low-income households. They provide:

- Firewood for winter
- Electric heaters during cold snaps
- Help with utility bills
- Emergency support to prevent power disconnections

Why it is a success:

- These NGOs are trusted by communities and have deep local networks, especially in Roma settlements and isolated rural areas.
- They respond quickly, often when other services are unavailable.

EU-Funded Pilots: projects like REACH, ENERGYCARE, and POWERPOOR — funded by EU programs — introduced energy mentors and low-cost energy-saving kits (LED bulbs, water-saving taps, reflectors) for the most vulnerable households.

Why it is a success:

- These pilots bring together social workers and energy experts, creating a bridge between social vulnerability and technical solutions.
- They create awareness, help people take small steps toward savings, and connect them with deeper renovation programs.

Slovenia has developed excellent tools — generous subsidies, expert advisors, engaged NGOs, and innovative pilots — but these need to be scaled, simplified, and integrated. There are still several limitations in tackling energy poverty.

As the first limitation, we can mantion the **Bureaucratic Barriers and Complex Application Processes**. Even though Eco Fund subsidies are generous, the application process is complex, especially for the most vulnerable.

To apply, one needs:

- Building ownership documents
- Energy performance certificates
- Technical quotes
- Access to a bank account or digital ID

This creates real barriers for:

- Elderly people living alone
- People with limited education or digital skills
- Those living in informal housing

As a result, many eligible people give up before completing the process — or never apply at all.

The second limitation is the **Exclusion of Renters and Marginalized Groups**. Most energy poverty support programs in Slovenia are aimed at homeowners. But what about:

- Tenants in poorly insulated apartments?
- People living in Roma settlements without formal addresses or property rights?

- Young families in rental housing struggling with high heating bills?

These groups are largely excluded from renovation programs, even if they are among the most energy-poor.

In Slovenia there is also a **Lack of Targeted Data and Identification Tools**. For example: Slovenia still lacks a national energy poverty register or real-time monitoring system. Municipalities often don't know:

- Which households are struggling with energy bills
- Which homes are the least efficient
- Where to focus renovation efforts

Without this data, support is scattered and not always directed to those who need it most.

There is also the problem with **Short-Term Projects or No Long-Term Strategy**. Many successful projects (like REACH or ENERGYCARE) are EU-funded pilots. They end after 2–3 years and are not integrated into national policy or funding.

There's no permanent program that ensures:

- Ongoing outreach to energy-poor families
- Follow-up visits
- Support networks that last beyond the pilot phase

In Slovenia there is still a **Low Public Awareness** level. Many vulnerable households don't know they're eligible for help — or don't know where to begin.

Outreach campaigns are limited, and information is often not adapted to elderly, rural, or non-Slovenian-speaking populations.

To **succeed in long-term** in the fight with energy poverty Slovenia has to:

- Build a national database of energy-poor households
- Simplify access to Eco Fund subsidies
- Extend support to renters and informal homes
- Fund permanent energy advisory services
- Invest in public education and outreach

Community energy & clean tech initiatives

- **Luče village**, part of the Horizon 2020 COMPILE project, became **self-sufficient** through local photovoltaics and communal battery storage, reducing electricity costs for households [5].
- NGO **FOCUS's REACH project** (2014–2017) empowered low-income households in Pomurje and Zasavje to adopt **sustainable energy habits**, involving local and national stakeholders [5].

• High uptake & grant effectiveness

- The **Eco Fund** (Ekosklad), via public calls, achieved strong engagement:
  - 2023–24 calls attracted **1,400+ applications**, funding ~650 households so far [6].
  - Builds on ZERO500 success, where **426 homes were renovated**, offering up to €18 000 per household [7].

- In May 2025, Slovenia secured **€23.5 million EU funding** to support ~1,100 households with EE/RES upgrades, plus advisory 'coordinators [8].

• Legal clarity & structured planning
  - A 2022 decree precisely defined **energy poverty criteria** (income, energy bills, efficiency, living conditions), improving targeting and planning [9].
  - The 2023–26 **Action Plan to Alleviate Energy Poverty** sets **quantified targets** (reduce rate from ~7.2% to 3.8–4.6%, renovate 8,000 households, save 573 GWh) with €34 million secured—enabling long-term, structured intervention [7].

Limitations & Challenges

• Awareness & accessibility gaps
  - Many vulnerable households remain unaware of programs: "these aids are still too little known" despite available funding [6].
  - Advisors note severe housing conditions and upfront costs still hinder access, even when subsidies are granted .

• Structural & systemic shortcomings
  - A 2020 NGO analysis highlighted that **Slovenia's NECP lacked clear definitions, targets, and monitoring systems** for energy poverty, which hampered policy tracking [10].
  - CAN Europe criticized the NECP for not addressing **structural drivers** like housing precarity and labour insecurity .

• Limited scope & one-off funding
  - Subsidies tend to be **one-off** (e.g., single applications up to €18k), which may not suffice for deep renovations .
  - Smaller grants may prioritize surface fixes (e.g., roofs first), while delaying more comprehensive upgrades .

5.2 Hungary

Access to energy is not generally a problem for Hungarian society, but the affordability of energy services is a major concern. This is because domestic incomes are significantly below the EU average, while energy prices have risen dramatically in recent years and the energy efficiency of the housing stock is demonstrably low. Although energy poverty is receiving increasing attention in policy making and research, it has not yet become a widely known and high priority social issue in Hungary.

Thus, targeted policies to address energy poverty have not yet been developed. There are also obstacles in approaching the issue, as there is still a lack of a national definition of energy poverty and no appropriate indicator to identify those affected. Developing these is a major challenge, as the necessary data and databases are not available. These would be essential not only for a clear understanding of the problem, but also for the effective design, monitoring and measurement of the impact of policies and support.

5.2.1National Strategies and Frameworks

As already mentioned, there is currently no independent strategy to address the challenges of energy poverty in Hungary, no institutional framework, no set goals or action plans in this area, and no definition of energy poverty in Hungary.

However, in this document we try to bring together the concepts, sectoral strategies, county and municipal development documents, related policies and packages of instruments that address energy poverty in a tangential way.

Nevertheless, some sectoral strategies address energy poverty from several angles. Of particular importance in this respect are **Hungary's National Energy and Climate Plan**, the related **National Energy Strategy 2030**, the **Long-Term Renewal Strategy** and the **Hungarian National Social Inclusion Strategy 2030**.

These strategies set out the objectives defined below. In the list, particular attention is paid to the elements that contribute to reducing energy poverty.

- The objectives of **Hungary's National Energy and Climate Plan** are grouped around five main dimensions, in line with the guidelines of the European Union's Energy Union:
    - **Decarbonisation dimension:** reducing greenhouse gas emissions and increasing the share of renewable energy in gross final energy consumption.
    - **Energy efficiency dimension:** improving the efficiency of energy use, with a particular focus on optimising final energy use.
    - **Energy security dimension:** ensuring the reliability and continued availability of energy supplies.
    - **Internal energy market dimension:** increasing the integration and efficiency of the energy market, including regional cooperation and infrastructure development Under this dimension, the strategy states that Hungary will measure the effectiveness of its policy to reduce heating difficulties by monitoring the share of households spending at least 25% of their income on energy (9.8% in 2016). It should give priority to vulnerable user groups. Hungary is focusing on two distinct social groups: large families living in a family house in a small settlement and pensioners living alone in a condominium (and sometimes in a family house).
    - **Research, innovation and competitiveness dimension:** supporting energy research and innovation and strengthening competitiveness in the energy sector.
- The main objectives of the new **National Energy Strategy** are to strengthen **energy sovereignty** and **security**, to **maintain the** results of the **cuts in rents** and **to decarbonise energy production**, which can only be achieved through a combination of nuclear and renewable energy sources.
  The strategy is structured around the following four key objectives:.
    - The Hungarian consumer will be at the heart of the strategy.
    - Strengthening security of energy supply.
    - Climate proofing the energy sector.
    - Exploiting the economic development potential of energy innovation.

  The strategy sets out the key objectives for the transformation of the domestic energy sector up to 2030 and the key actions to achieve them, but also includes a longer-term

vision to 2040 to provide a longer-term vision focused on providing "clean, smart and affordable" energy.
Although energy poverty is not presented as a separate concept in the document, nor is it discussed as a specific topic, support for vulnerable users is included as a programme, for which a project idea has been developed, which proposes to assess the situation of vulnerable users and to develop programmes taking into account the characteristics of the social groups concerned.

- The overall objective of the **Long-Term Renewal Strategy** is to lay the foundations for achieving a **sustainable, energy and cost-efficient building stock** by 2050 through energy efficiency, value, comfort and health improvement measures, renewable energy use and smart technologies that will reduce primary energy use and carbon emissions at national level.
  The Government of Hungary sets out the following vision (2050) for our built environment:
    - **It is liveable** because it provides families in Hungarian towns and villages with a living space that contributes to a higher quality of life. Another objective is to increase the housing stock through the rehabilitation of brownfield sites.
    - **Affordable** because a building is constructed or renovated with high quality and sustainability in mind, is energy efficient, uses renewable energy and operates with minimal overheads, with additional support for residential construction.
    - **It is clean** because it is environmentally responsible in terms of the natural environment, the materials and energy sources used and the waste generated by households. It also sets the course for a green transformation of the construction industry.
    - **It is accessible** because its design and technical solutions ensure comfortable and safe use for everyone, including those who need special equipment or technical solutions.
    - **It is modern** because it uses innovative and smart technologies to help building users in their daily lives and to run their buildings.

  The document includes a separate chapter on the worst performing segments of the building stock and on households to be assisted. In this context, a number of measures have been formulated with the aim of significantly reducing the number of these households.
    - Keeping energy prices low through public regulation (rationing),
    - Social fuel programme,
    - Developing electricity for farms at household scale,
    - Improving housing conditions in "catching-up settlements",
    - Checking the existence of an energy certificate,
    - Introduce EPC contracts for renovations and involve ESCOs in projects,
    - Education, raising consumer awareness.

However, in order to address the issue of energy poverty not only from an architectural and energy perspective, but also from a social perspective, it is important to identify its negative social impacts and the strategy to address them.

- The **Hungarian National Social Inclusion Strategy 2030** offers possible solutions to address the negative co-domestic effects. The objectives of the strategy build on the results achieved in recent years, the institutional system of catching-up policy and the instruments of sectoral

policy and take into account the social problems arising from the coronavirus. The main objective is to reduce poverty and to narrow the gaps between the roma and non-roma populations in terms of key indicators of poverty and social mobility.

The basic principle of the Inclusion Strategy is that labour market integration, social inclusion and related human services, strengthening opportunities for social mobility serve the benefit and well-being of society as a whole by promoting the inclusion of disadvantaged social groups.

The strategy focuses on two key target groups for improving social inclusion: people living in extreme poverty (especially roma) and children. The strategy's priority overarching objectives are:

- reducing the proportion of people at risk of material and social deprivation, with a particular focus on the roma population;
- preventing the re-emergence of poverty and social exclusion;
- improving equal access to social economic goods and strengthening social cohesion.

To achieve the objectives of the strategy, it sets out lines of action in nine areas of intervention, including housing and energy poverty:

- Birth and childhood
- Public education, vocational training, higher education - from nursery to university
- Youth affairs, having children, starting a family, lifestyle
- Employment, adult learning, social economy
- Spatial inequalities, urban development - **housing and energy poverty** - environmental awareness, environmental protection
- Physical and mental health, health care
- Roma identity, community building, awareness raising, rights enforcement
- Institutional framework for the implementation of the Strategy, national and Carpathian Basin partnership
- Monitoring and follow-up of the strategy

5.2.2 Case Studies of National Initiatives

Breaking out of energy poverty on your own is almost impossible. There are three ways to approach this, and the more of them that are implemented, the greater the impact of the support:

1. increase income through direct subsidies (for housing or energy), vouchers and other solutions;
2. reducing expenditure: lower energy prices through tax breaks, social tariffs and other solutions;
3. support for the creation of modern housing: financing energy renovation, tax incentives and other means to help the efficiency of the housing stock.

These approaches can be divided into two groups of measures:

- those with a short-term impact, which help households pay their energy bills, prevent disconnection of service or offset in energy prices.
- more complex, capital-intensive solutions, such as improving energy efficiency in households, which would not only contribute to reducing energy poverty in the long term but would also have many other co-benefits.

As mentioned above, there is no official definition of energy poverty in Hungary, so there are no policies or subsidies specifically targeting energy poverty; some of those in need may be covered by the available family policy measures and energy modernisation subsidies. These subsidies are the following, which will be explained in more detail in the next section:

- Support for households and consumers (utility cost reduction)
- Social firewood subsidy programme
- Hungary's Home Renovation Programme for Home Energy Efficiency Investments
- Rural Home Renovation Programme
- Rural Family Housing Subsidy

These grants are partly financed by the Hungarian state budget, while the European Union also contributes to their implementation. In addition, for many investments, own resources are essential for full implementation.

In Hungary, the instruments listed and described below help reduce the energy burden on the population and support energy efficiency investments.

Instrument	**Environmental and Energy Efficiency Operational Programme Plus (EEEOP+)**
Level	EEEOP+ is an EU and nationally funded operational programme that provides non-reimbursable support for environmental and energy efficiency projects. A national programme supporting environmental and energy efficiency improvements throughout Hungary.
Objective	The main objectives of the programme are to reduce pollution and overexploitation of resources, protect biodiversity and promote a circular economy. It focuses on developing green and blue infrastructure and supporting local energy communities.
Key measures	**Developing a renewable energy economy:** supports energy efficiency measures and awareness raising to promote energy efficiency and reduce greenhouse gas emissions. **Water conservation and green-blue infrastructure development:** to improve water management and sustainable use of natural resources. **Creating local energy communities:** encouraging community energy production and use, especially in carbon-intensive counties such as Baranya, Borsod-Abaúj-Zemplén and Heves.
Target Groups	Local governments and associations of local governments Central budgetary bodies and their institutions Enterprises, especially small and medium-sized enterprises NGOs and other non-profit organisations

	Residents
Funding Sources	The programme is funded by the European Union Cohesion Fund and the central budget of Hungary.
Monitoring & Evaluation	The implementation and results of the programme are overseen by the Minister of Public Administration and Regional Development and Ministry of Energy, who are responsible for publishing calls for proposals and monitoring projects.
Relevant Regulation/Directive	Government Decision No 1527/2023 (XII.1.): laying down the annual development envelope for the EEEOP+. Government Decree No. 256/2021 (V. 18.) on the rules governing the use of grants from certain EU funds in the 2021-2027 programming period.

Instrument	**Support for households and consumers (utility cost reduction)**
Level	National
Objective	Reducing household energy costs. Easing the burden on households, especially for lower income groups. Reducing inflation through energy prices.
Key measures	Introduction and maintenance of regulated prices in the energy market (electricity, gas, district heating). Government regulations and laws to fix energy prices. State involvement in financing energy service providers or covering their losses. State ownership of some service providers (e.g. MVM) to maintain price control.
Target Groups	Residential consumers, especially low- and middle-income households.
Funding Sources	National budgets
Monitoring & Evaluation	The Hungarian Energy and Public Utility Regulatory Authority supervises energy prices and the operation of service providers. The State Audit Office of Hungary may carry out audits from time to time to assess sustainability. The measure is also monitored and commented on by international organisations (e.g. EU, OECD).
Relevant Regulation/Directive	Act LIV of year 2013 on the implementation of reducing the household overhead costs Government Decree 259/2022 (VII.21.) on the determination of certain universal service tariffs

Instrument	Social firewood subsidy programme
Level	Regional, municipal
Objective	Reducing winter heating costs for households in need. Providing heating for the rural poor. Supplementing the social assistance system with in-kind support. Reducing illegal logging and promoting sustainable forest management. It is open to municipalities with less than 5000 inhabitants.
Key measures	Local government grant scheme: municipalities can apply for public funding and then use it to buy firewood and pass it on to local people in need. The role of state forestry: state-owned forestry holdings provide firewood at preferential prices. Provision of free or discounted heating fuel: for socially disadvantaged families. Central funding: the costs of the programme are covered by the national budget.
Target Groups	Low-income households in social need. Rural population where gas heating is less available. Single elderly people, large families and people in need of social care.
Funding Sources	Central budget: the government allocates a fixed amount each year to the programme. Currently HUF 5 billion (approx. EUR 12 500 000/year) Municipal resources: some municipalities may provide additional funding. Contribution from public forestry: reduced price for the purchase of firewood.
Monitoring & Evaluation	Public oversight: the Ministry of the Interior can monitor the effectiveness of the programme. Social feedback: based on the satisfaction of the local population and the usefulness of the programme.
Relevant Regulation/Directive	Municipal regulations published each year

Instrument	Protected (status) consumers
Level	National and local level. Legislation and programmes apply at national level, but implementation can take place at local level according to consumer needs and local circumstances.
Objective	The aim is to ensure and protect access to energy for vulnerable consumers, reduce energy costs for socially disadvantaged groups and prevent social and economic exclusion.
Key measures	Possibility to use deferment, instalment or prepayment meters for utility debts.
Target Groups	Socially vulnerable and disabled.

Funding Sources	National budget
Monitoring & Evaluation	Annual reports on the use of discounts
Relevant Regulation/Directive	Act XL of 2008 on the Supply of Natural Gas Government Decree No 19/2009 (I. 30.) on the implementation of natural gas supply National social and disability legislation

Instrument	**SUPPORT for families (TÁMASZ)**
Level	National
Objective	This programme mainly helps vulnerable families to improve their housing conditions through minor renovations and interventions.
Key measures	The grant, worth hundreds of thousands of forints, is open to applications from any municipality in the country. Minor renovations and interventions can include, for example, replacing windows and doors, painting, insulation; inspecting, repairing or helping to design a heating, water and sewerage or electricity system; buying building materials, paying for the work of a building specialist, providing expert advice, etc.
Target Groups	They live in owner-occupied or rented housing, and this property has suffered damage or is in a technical condition that endangers or even prevents the dwelling from being used as intended, i.e. as a decent, safe home.
Funding Sources	Donation
Monitoring & Evaluation	Continuous presence of the organisation during the project.
Relevant Regulation/Directive	-

Instrument	**Hungary's Home Renovation Programme for Home Energy Efficiency Investments**
Level	National
Objective	**Improving energy efficiency:** the primary objective of the programme is to reduce the energy consumption of residential buildings, thus contributing to sustainable development and energy independence of the country. **Environment:** investments in energy efficiency reduce greenhouse gas emissions, supporting climate protection goals. **Economic recovery:** the programme will stimulate the construction industry and create jobs in the renovation sector. A reduction of at least 30% in primary energy consumption per building is required as a result of energy modernisation compared to the pre-project (baseline) situation.
Key measures	Providing non-reimbursable support (max. 3 million HUF – 7.5000,00 EUR) and soft loans (max. 3 million HUF – 7.5000,00 EUR) to households for energy efficiency improvements such

	as insulation, replacement of windows and doors and heating upgrades. Applicants can apply for funding for: • system level (full) thermal insulation of the building's external boundary elements, roof slab insulation, • replacement of building envelope structures considered as window and door frames, energy efficiency improvements, • modernisation of domestic hot water (DHW) systems, • heating modernisation (air-to-water heat pump, secondary heating circuit, automatic central and local controls).
Target Groups	Owners of family houses who want to make energy efficiency improvements. Single-family houses that received a permit for occupancy before 01.01.2007.
Funding Sources	The programme is funded by the European Union under Hungary's Recovery and Resilience Plan and from 2025 EEEOP+.
Monitoring & Evaluation	Monitoring: the investments and the use of the support under the programme are regularly monitored by the designated authorities. Reporting: beneficiaries must report on the progress and results of their investments. 30% reduction in primary energy use per building.
Relevant Regulation/Directive	Government Decree 256/2021 (V. 18.) on the rules for the use of certain EU funds in the programming period 2021-2027 Environmental and Energy Efficiency Operational Programme Plus

Instrument	**Rural Home Renovation Programme**
Level	National
Objective	**Improving housing conditions:** the programme aims to provide people living in small rural settlements with the opportunity to renovate and modernise their homes, thereby improving their quality of life. **Increasing the population retention of rural settlements:** the subsidy will help to stop the depopulation of villages, encouraging people to stay in their villages and making rural life more attractive.
Key measures	**Non-reimbursable support:** up to HUF 3 million (7.500,00 EUR) can be requested under the scheme, which can be used to cover both the cost of materials and the cost of labour, in equal parts. **Soft loan:** in addition to the subsidy, a soft loan of up to HUF 6 million (15.000,00 EUR) can be used to pre-finance renovation costs.

	The energy efficiency investments supported by the programme are: • construction, modernisation or replacement of heating systems, including the use of renewable energy sources • external thermal insulation of buildings • installation or replacement of external windows and doors • replacing, renovating or insulating roofs; • installation, replacement or extension of solar collectors, solar panel systems or parts thereof
Target Groups	Families with children: families with children living in municipalities with less than 5,000 inhabitants are eligible. Pensioners: from 27 March 2025, pensioners living in small rural settlements can also apply for the subsidy.
Funding Sources	National budgets: the programme is funded by the Hungarian state budget.
Monitoring & Evaluation	Reporting: beneficiaries must submit the necessary documents and certificates to the Hungarian State Treasury after the aid has been used. Controls: the authorities under the scheme have the right to carry out on-the-spot checks to ensure that the support is being used properly.
Relevant Regulation/Directive	Government Decree 389/2024 (XII. 11.) on the Rural Home Renovation Programme

Instrument	**Rural Family Housing Subsidy**
Level	A national-level housing support programme provided by the Hungarian government for people living in rural areas.
Objective	The Rural Family Housing Subsidy aims to maintain rural population, revitalise depopulated settlements and improve housing conditions for families. This can be achieved through the purchase of new property and the extension and modernisation of existing property.
Key measures	Grant: the amount of the grant varies depending on the number of children and the purpose for which it is used. In case of purchase of real estate and simultaneous modernisation/expansion: • For one child: up to HUF 600 000 (approx. EUR 1.500,00) • For two children: up to HUF 2.6 million (approx. EUR 6.500,00) • For three or more children: up to HUF 10 million (approx. EUR 25.000,00) For modernisation or extension of an existing property: • For one child: up to HUF 300,000 (approx. EUR 750,00) • For two children: up to HUF 1.3 million (approx. EUR 3.250,00)

	• For three or more children: up to HUF 5 million (approx. EUR 12.500,00) Soft loan: the subsidy can be accompanied by a loan with a fixed interest rate of up to 3%. Energy efficiency investments for which it can be used: • Heating system modernisation • Installation of renewable energy sources • Thermal insulation and replacement of windows and doors • Modernisation of lighting • Modernisation of domestic hot water system • Smart home solutions
Target Groups	Married couples raising or adopting a child and single parents: couples raising a child, life partners and single parents, as well as couples who are expecting a child(ren) are eligible. People living in small settlements: the scheme is mainly available in so-called 'preferred small settlements' of less than 5,000 inhabitants, which are listed in the relevant legislation.
Funding Sources	The programme is financed by the Hungarian State budget, which is determined by the annual budget laws. Providing a co-payment.
Monitoring & Evaluation	Control: the use of the support will be controlled by the Hungarian State Treasury and the designated authorities, including on- the-spot checks. Reporting: reports on the results and impact of the programme are produced and published by government bodies.
Relevant Regulation/Directive	17/2016 (II. 10.) on Family Housing Allowance for buying or extending second-hand homes and Government Decree No. 16/2016 (II. 10.) on housing subsidies for buying or building a new home. Government decree 256/2011. (XII.6.) on support for housing construction

Instrument	**Housing support**
Level	National
Objective	Support for young workers
Key measures	Maximum HUF 150 000 (approx. EUR 375,00) per month in housing support (covering rent or housing loan repayment)
Target Groups	Under 35 years for young workers
Funding Sources	The support is financed by the Hungarian State budget
Monitoring & Evaluation	The employer checks whether the employee is entitled to the subsidy. By 31 January of the year following the tax year, the employer must inform the Hungarian National Tax and Customs Administration of the property to which the subsidy relates and the purpose of the subsidy.
Relevant Regulation/Directive	Government Decree No. 403/2024 (XII.18.) provides for the detailed rules for housing support

Instrument	"Warmth at Home" Programme
Level	National
Objective	The aim of the "Warmth at Home" Programme was to promote energy efficiency improvements in the home, reduce household energy consumption and contribute to climate protection. The support was used to replace old, outdated appliances and heating systems and to improve the energy efficiency of homes.
Key measures	Non-reimbursable support for the replacement of energy efficient household appliances (refrigerators, washing machines) and boilers. • Household appliance replacement sub-programme: replacing old refrigerators, freezers and washing machines with more energy efficient appliances. • Boiler replacement sub-programme: replacement of obsolete solid and gas fired boilers with more modern appliances. • Support for window replacement and insulation: support for energy efficiency renovations in family houses and condominiums. • Energy efficiency upgrading of apartment blocks: modernisation of central heating systems, insulation and replacement of windows and doors.
Target Groups	Population (mainly low- and middle-income households). Condominiums, housing associations. Rural and urban property owners alike.
Funding Sources	The programme was supported by the state budget and EU funds (e.g. Environmental and Energy Efficiency OP). In some cases, participants were required to provide their own contribution.
Monitoring & Evaluation	The public authorities constantly monitored the use of the support. Those who drew down grant funds had to provide proof of purchases and improvements.
Relevant Regulation/Directive	2020/2021 Government Decisions on energy efficiency targets. Environmental and Energy Efficiency OP regulations that governed the use of EU energy efficiency funding.

4.2.3 Success Stories and Limitations

The utility cost reduction in rationing can alleviate energy costs to some extent, but the impact is unevenly distributed: the reduction in gas and electricity prices mainly benefits urban households, while many low-income rural wood-fired households do not benefit.

In addition, this type of measure can also be criticised because, while it may alleviate energy poverty in the short term, it may not be a sustainable solution in the long term. In fact, the income

saved through subsidies is often used for additional energy consumption in energy inefficient homes, rather than being used for investments to improve the energy efficiency of the property.

Improving the energy efficiency of homes offers a more sustainable long-term solution than direct financial support, as it reduces energy demand and provides more stable indoor temperatures. An upgraded building also creates a more comfortable environment with less energy, while households often use part of the savings from energy efficiency improvements to increase thermal comfort. In addition, such investments bring many other benefits, both to individuals and to society, such as improved health conditions and reduced environmental pressures.

Support for households and consumers (utility cost reduction):

Success:

- In the short term, it reduced the burden on the population.
- It helped poorer households to maintain energy consumption.
- The introduction of a market price above average consumption in 2022 was a step towards a more sustainable system.

Limitations:

- It distorts the market, less incentive to improve energy efficiency.
- It places a significant burden on public budgets in the long term.
- It could reduce the financial stability of energy suppliers.
- Fiscal sustainability: the state must continuously finance the difference between market and official prices.
- Volatility of international energy prices: if market prices remain high in the long term, it will become increasingly difficult to finance the system.
- EU rules and market regulation: in the long term, the EU would push Member States towards market-based pricing.
- Under-investment and under-development of infrastructure: regulatory prices have reduced the incentive for energy suppliers to invest.

Social firewood subsidy programme

Success

- It helps the poorest households get through the heating season.
- Reduces the risk of winter chills.
- It provides targeted assistance tailored to local authorities. The municipality must ensure the supply of firewood to households in need.
- Banded support scheme
- Producing local wood chips or briquettes - The municipality of Szakmár buys and distributes wood chips from its own resources to those in need. This fuel has a higher calorific value than the fuel available through the Ministry of Interior's social fuel tender.

Limitations:

- A limited amount of firewood is available and does not provide full winter heating.

- Limited resources: not everyone in need can get enough firewood.
- Administrative difficulties: some municipalities are slow or difficult to administer the programme.
- Sustainability issues: the pressure on public forests is increasing, posing long-term forest management challenges. Black market: some beneficiaries may resell the firewood they receive. The claim and distribution system is not always efficient, and unfair distribution may occur.

Hungary's Home Renovation Programme for Home Energy Efficiency Investments

Success

- Tens of thousands of households have upgraded their homes, mainly by replacing windows and doors, installing insulation and heating.
- State aid has covered up to 50% of renovation costs, making energy efficiency improvements more affordable.
- Professional advice: the professional advice available under the programme helps beneficiaries to select and implement appropriate investments. - In the 8th district of Budapest there is a one-stop shop system to inform the public about energy efficiency funding, to assist the application process and to provide related legal, financial and technical advice. The RenoPont Energy Home Renovation Centre is run by the municipality in cooperation with the Hungarian Energy Efficiency Institute.
- Online administration: the use of online platforms will speed up and simplify the submission and processing of aid applications.

Limitations

- The programme was conditional on a co-payment and pre-financing, so those most in need (who could not raise the necessary own resources) could not benefit from it.
- Resource constraints: if the budget is exhausted, the programme may be suspended, limiting the number of participants.
- Contractors' capacity: increased demand may mean that contractors are unable to meet deadlines, leading to delays.

Rural Home Renovation Programme

Success

- Securing resources in the longer term:
  To ensure the sustainability of the programme, it is important that it is not just a one-off grant scheme, but that predictable funding is available over a number of years.
- More flexible eligibility conditions:
  It would be worthwhile to allow for the possibility to tailor the aid to individual needs, for example with a higher amount of aid for larger energy efficiency investments.
- Introduction of local level advice:
  Rural households would benefit from the development of a network of advisors at local level to help with administration and the selection of suitable contractors.
- Development of a tracking system:

To ensure transparency and efficiency, the introduction of a digital monitoring system would allow projects to be tracked and possible abuses to be detected.

Limitations

- Resource limits: if available funds are exhausted, the programme may be closed prematurely, limiting the number of beneficiaries.
- Lack of information: potential beneficiaries may not be informed in time about the possibilities of the programme.

Rural Family Housing Subsidy

Success

- Population retention: the programme has helped to reduce population decline in some rural settlements, although the long-term effects are still being assessed.
- Improving the housing stock: the aid has helped to modernise many properties, which has improved the quality of the rural housing stock.

Limitations

- Lack of information: some beneficiaries do not have sufficient information on the details of the aid, the application procedure and the necessary documentation, which may hamper the use of the scheme.
- Rise in house prices: the introduction of the scheme has led to a rise in house prices in some small communities, making it more difficult for those who buy with the help of the scheme to find a suitable property.
- Limited contractor capacity: in many cases, smaller municipalities have difficulties in finding suitable contractors to carry out upgrading and extension works, which can lead to significant delays and cost increases.
- Ex-post settlement and administrative burden: the settlement process is a major administrative challenge for claimants, especially for those who do not have the financial skills or support to manage it.
- Long lead times: the processing of aid applications and disbursement can be time-consuming, which in some cases can delay the implementation of investments.
- Poor-quality properties: the condition of many properties in the preferred municipalities is so poor that the amount of aid is not sufficient to carry out a full renovation, so the options for people living there remain limited.

"Warmth at Home" Programme

Success

- Thousands of households have benefited from subsidies, resulting in a significant reduction in household energy consumption.
- New equipment and upgrades have contributed to sustainability and reducing carbon emissions.
- Targeted support for the household appliance replacement programme.

- The beneficiaries were from lower income groups, so the programme really reached those who needed it most.

Limitations

- The popularity of the grant meant that funds were quickly exhausted, and many people were unable to take advantage of the opportunity.
- Administrative burden: the application system was complicated and difficult to follow for many households.
- Control problems: in some cases, it was difficult to verify that improvements had actually been made.
- Fragmentation of the application stages: different conditions applied in the different funding circuits, which could lead to confusion among applicants.

In addition to the above-mentioned instruments, it is also worth highlighting the **Programme for the Catching-up of Settlements**, launched by the Hungarian government in 2019 to support the poorest settlements. The 300 disadvantaged settlements identified by the Hungarian Central Statistical Office have been on the road to complete marginalisation for years, and breaking out of this situation is only possible with comprehensive professional support. In these settlements, the accumulation of disadvantages is clearly visible: the proportion of housing without amenities is five times the national average, the proportion of people without primary education is three times higher, while the birth rate is three times the national level. These figures illustrate the importance of the effectiveness of the catching-up programme, not only at local level but also at social level.

At the start of the programme in 2019, eight organisations were involved in 31 municipalities, and by 2024, 238 municipalities had been developed in cooperation with 28 different implementing organisations. This number is expected to reach 300 by 2025. One of the most important features of the programme is that it does not apply a centrally defined, uniform intervention model, but rather implements development measures tailored to the specific challenges of each locality, based on social diagnosis carried out locally.

A total of 52 solar power plants will be built in the next few years in the Catching-up Settlements Programme sites, based on the experience of a successful project already described in Chapter 6, which will develop a distribution mechanism to channel the revenues from energy production to families in need. The selection system takes into account social situation, age of children and cooperativeness.

The **TÁMASZ** programme was set up in 2019 with the aim of responding to possible housing crises, but this programme mainly helps families in need to improve their housing conditions through minor renovations and interventions. A total of 150 households have participated in the TÁMASZ programme up to summer 2024, and 612 people have received support to improve their housing conditions.

6. Regional Instruments

Table structure for overview of regional instruments

Instrument	
Level	National / regional / EU
Objective	
Key measures	
Target Groups	
Funding Sources	
Monitoring & Evaluation	
Relevant Regulation/Directive	

6.1 Slovenia

6.1.1 Overview of Regional Approaches for Pomurje and Podravje

In Pomurje and Podravje, several tools are available to address energy poverty, such as subsidies for building energy renovations, assistance with energy costs, support through European funds, and the promotion of energy efficiency and renewable energy sources. These initiatives are carried out by municipalities, regional bodies, and NGOs, in collaboration with national programmes and European financing.

Instrument	**Measures in Local/Municipal Energy Concepts (Ministry of the Environment, Climate and Energy)**[11]
Level	Local and regional
Objective	The Local energy concept is a concept of the development of local community or more local communities in the field of supply and use of energy, which includes ways of future energy supply and also measures for rational use of energy, combined production of heat, electric power and use of renewable energy sources.
Key measures	The common and key measures of the Local energy concets related to the reduction of the level of energy poverty in region/municipality are: • education and awareness raising in filed of EE and RES,

[11] Source: https://www.energetika-portal.si/podrocja/energetika/lokalni-energetski-koncept/

	• boosting energy renovation in multi-apartment buildings, • study of suitable areas for the deployment of shared renewable energy systems, • reduction of energy consumption costs and maintenance costs of energy devices and • etc. By combining similar measures, municipalities and local communities can effectively address energy poverty, improve the quality of life of residents, and contribute to greater energy independence and sustainable development.
Target Groups	Municipalities (or a group of municipalities) are the main drivers, but successful Local Energy Concepts in Slovenia involve public institutions, citizens, businesses, and expert organizations working together to tackle also the problem of energy poverty.
Funding Sources	The development and implementation of the measures in Local Energy Concepts can be financed through a mix-combination of national (ministries, EcoFound, etc.) regional/local (regional founds, municipal budget, etc.) and European Union (European Regional Development Fund, Cohesion Fund, Interreg Programmes, etc.) funding sources. These funding mechanisms collectively support Slovenia's efforts to enhance energy efficiency, integrate renewable energy sources, and achieve climate goals at the local level through the development and execution of Local Energy Concepts. Organizations such as the Local Energy Agency Pomurje (LEA Pomurje) assist municipalities in drafting and implementing LEKs. They often operate with support from EU programmes like Intelligent Energy Europe and collaborate with national and regional authorities.
Monitoring & Evaluation	The monitoring and evaluation of the measures define in the Local energy concepts for local communities/municipalities are primarily the responsibility of local municipalities, but they are also obliged to annual report on the implementation of measures to the ministry responsible for energy.
Relevant Regulation/Directive	• Energy Act (Energetski zakon – EZ-1), • Energy Efficiency Act (Zakon o energetski učinkovitosti - ZEU), • Environmental Protection Act (Zakon o varstvu okolja - ZVO-1), • Regulation on the Implementation of Energy Efficiency Measures in Buildings (Pravilnik o izvajanju ukrepov za povečanje energetske učinkovitosti v stavbah), • Renewable Energy Sources Act (Zakon o spodbujanju rabe obnovljivih virov energije - ZRESE), • Directive (EU) 2018/2001 on the Promotion of the Use of Energy from Renewable Sources,

- Directive 2012/27/EU on Energy Efficiency,
- Directive 2009/28/EC on the Promotion of the Use of Energy from Renewable Sources,
- Cohesion Policy Regulations (ERDF),
- Directive 2010/31/EU on the Energy Performance of Buildings (EPBD)

Local Energy Concepts (LEKs) in Slovenia must adhere to these frameworks to reduce energy consumption, improve efficiency, and promote sustainability at the local level.

Instrument	**Measures in Sustainable Energy and Climate Action Plans - SECAP (Covenant of Mayors - Europe)**[12]
Level	Local and regional (in case of a regional SECAP)
Objective	Recognising the scale of this challenge, the European Union has significantly increased its focus on energy poverty over the past years. This priority is now embedded in several EU policies aimed at ensuring energy affordability, promoting efficiency, and advancing a just transition. Energy poverty has long been a pillar of the Covenant of Mayors' commitments, but starting in 2025, reporting on energy poverty is a mandatory requirement for all signatories.
Key measures	In May 2022, the Covenant of Mayors introduced a dedicated energy poverty section within its reporting and monitoring framework (rewatch the webinar and related presentation). From January 2025 onward, all signatories must report on energy poverty as part of their Sustainable Energy and Climate Action Plan (SECAP) or monitoring reports.
Target Groups	Local authorities/municipalities are the main drivers, but successful SECAP´s involve a wide list of potentially important stakeholders like public institutions, citizens, businesses, banks, ESCO´s, local and regional energy agencies and expert organizations working together to tackle also the problem of energy poverty.
Funding Sources	The development and implementation of the measures in Sustainable Energy and Climate Action Plans can be financed through a mix-combination of national (ministries, EcoFound, etc.) regional/local (regional founds, municipal budget, etc.) and European Union (European Regional Development Fund, Cohesion Fund, Interreg Programmes, etc.) funding sources. These funding mechanisms collectively support Slovenia's efforts to enhance energy efficiency, integrate renewable energy sources, and achieve climate goals at the local level through the development and execution of Local Energy Concepts. Organizations such as the Local Energy Agency Pomurje (LEA Pomurje) as official Covenant Supporters helps

[12] Source: https://eu-mayors.ec.europa.eu/en/home

	municipalities in drafting and implementing the measures defined in SECAP.
Monitoring & Evaluation	The monitoring and evaluation of the measures define in the Sustainable Energy and Climate Action Plans for local communities/municipalities are primarily the responsibility of local municipalities, but CoM signatories also commit to submitting a "Monitoring Report" every second year following the submission of the SECAP "for evaluation, monitoring and verification purposes" to the Covenant of Mayors office.
Relevant Regulation/Directive	• Energy Act (Energetski zakon – EZ-1), • Energy Efficiency Act (Zakon o energetski učinkovitosti - ZEU), • Environmental Protection Act (Zakon o varstvu okolja - ZVO-1), • Regulation on the Implementation of Energy Efficiency Measures in Buildings (Pravilnik o izvajanju ukrepov za povečanje energetske učinkovitosti v stavbah), • Renewable Energy Sources Act (Zakon o spodbujanju rabe obnovljivih virov energije - ZRESE), • Directive (EU) 2021/1119 – European Climate Law, • Directive 2010/31/EU – Energy Performance of Buildings Directive (EPBD), • Directive 2009/28/EC – Renewable Energy Directive (RED I), • Directive (EU) 2018/2001 – Renewable Energy Directive (RED II), • Directive 2012/27/EU – Energy Efficiency Directive (EED), SECAP´s are influenced by both EU-wide regulations and national Slovenian laws, aiming for energy efficiency, renewable energy, and climate resilience. Municipalities are encouraged to develop localized climate and energy strategies that align with these regulations to contribute to EU climate targets.

Instrument	**Municipal financial assistance**
Level	Local – local authorities/municipalities
Objective	Municipalities help their citizens who find themselves in financial difficulty. They can apply for municipal cash/social assistance by submitting an application, which, among other things, allows them to receive assistance in paying bills intended to provide basic and essential living needs (electricity, utilities, heating, etc.), assistance in purchasing energy products or heating fuel, etc.
Key measures	Municipal financial/social assistance to socially vulnerable individuals and families is intended to overcome the current material vulnerability of socially vulnerable individuals and

	families, including payment of essential living expenses (electricity, utilities, heating, etc.), assistance with the purchase of firewood and winter clothing, etc. Financial assistance is usually granted once a year.
Target Groups	Beneficiaries of municipal financial/social assistance are individuals or families who are citizens of an individual municipality, i.e. have permanent residence in the municipality and meet the criterion of not having sufficient means of subsistence after having exhausted all other options for obtaining means of subsistence or resolving social hardship.
Funding Sources	The funding sources for municipal financial assistance in Slovenia is in general the budget of the the concerned municipality, but can come also from a combination of national funds, European Union (EU) funds, and local budget allocations.
Monitoring & Evaluation	Each municipality typically has its own audit committee or financial control office that oversees the correct allocation and spending of municipal funds. These local committees are responsible for ensuring that municipal financial assistance (e.g., subsidies for citizens, energy assistance programs) is spent according to the intended purposes.
Relevant Regulation/Directive	• Public Finance Act (Zakon o javnih financah), • Audit Act (Zakon o reviziji), • Accounting Act (Zakon o računovodstvu), • Directive 2014/24/EU – Public Procurement Directive, • Directive 2013/34/EU – Annual Financial Statements Directive, • Directive 2011/85/EU – Requirements for Budgetary Frameworks of the Member States The payment and management of municipal financial assistance in Slovenia are guided by several EU directives, such as the Public Procurement Directive and the Annual Financial Statements Directive, which ensure the proper allocation, transparency, and control of funds. These directives, along with national regulations like the Public Finance Act, provide a robust legal framework for monitoring and controlling financial assistance payments.

Instrument	**Energy audits (ENSVET)[13]**
Level	National / local – organizationally at national and operationally at the local level.
Objective	Energy audits are highly recommended also for socially vulnerable households. They can gain a lot of information

[13] Source: https://www.ekosklad.si/prebivalstvo/zmanjsevanje-energetske-revscine

	about efficient energy use and cost-effective energy saving options through energy audits, which has been demonstrated in several projects in Pomurje.
Key measures	An energy audit is one of the most important tools in trying to control energy costs. For households, a simplified energy audit is suitable, where the measures that could be implemented are easily visible. Energy-poor households can apply for a free inspection through the Red Cross, the Murska Sobota Social Work Center, etc.
Target Groups	Citizens who are recipients of extraordinary cash social assistance or cash social assistance and/or protection allowance can register for a free home visit from an energy consultant with a professional worker at the social work center.
Funding Sources	The consultation is open to all interested private persons, legal and public sector entities. Citizens who receive emergency social assistance or cash social assistance and/or a protection allowance can register for a free home visit from an energy advisor with a social worker at the Social Work Centre or on the Eco Fund´s website.
Monitoring & Evaluation	Eco Fund's main goal is to help Slovenia achieving national environmental goals in the field of RES and RUE. It is financed through various state and EU programs. Its main funding source initially came from environmental taxes — particularly fees for air pollution and other environmental burdens. Over time, the Eco Fund's resources have been supplemented by EU funds, budgetary contributions, and revenue from repayments of loans it has granted for eco-friendly projects.
Relevant Regulation/Directive	Eco Fund itself are responsible for reviewing documentation, checking compliance, and conducting random or targeted site visits.

6.1.2 Examples and Best Practices

Pomurje Region

1. REACH Project (2014–2017)

A flagship initiative in Pomurje and Zasavje, REACH ("Reduce Energy Use and Change Habits") provided customized energy advice and free-saving devices to energy-poor households. It trained vocational students, conducted over 1,564 home visits, and distributed ~6,650 devices—resulting in €65 saved annually per household, with €48,200 invested and estimated lifetime savings of €840,000 [11].

Best Practices & Impact:

- Combining personalized advice with tangible tools directly empowered households.

- Dual focus on immediate savings and embedding the issue in regional/national policymaking.

2. ESINERGY Project (2024–2026)

Implemented by LEA Pomurje under Interreg Danube, ESINERGY tests **peak-load reduction pilots** through battery storage, heat pumps, EV chargers, and energy communities. It also develops a regional Master Plan for replicable policy implementation [12].

Best Practices:

- Empowering prosumers to balance their own generation and grid demand.
- Integrating local pilot projects with broader regional governance strategy.

3. GEOTHERMAL Pilot in Moravske Toplice (2024)

This Danube GeoHeCo-funded pilot at the Martjanci kindergarten replaced fossil systems with a **geothermal + biomass hybrid**, showcasing sustainable heating for public buildings and serving as a replicable model [13].

Best Practices:

- Shifting public infrastructure to renewables boosts visibility and trust.
- Educational value as a living example for other municipalities.

4. LEAP's Living Lab & Capacity Building

Through active involvement in the 2ISECAP "Living Lab" initiative, LEA Pomurje supported Pomurje's 27 municipalities in developing updated **Local Energy and Climate Plans (LECPs/SECAPs)**, enabling peer exchange and systemic improvement [14].

Best Practices:

- Participatory planning enhances stakeholder engagement and ownership.
- Living Labs bridge practical solutions with policy planning.

Podravje Region

1. LEA Spodnje Podravje's Energy-Management Programs

This agency offers **energy performance certificates**, monthly **energy accounting**, and comprehensive advising to municipalities and private entities. It also leads pilots like SMEnergy and LocalGoGreen to pilot sustainable public-sector approaches [15].

Best Practices:

- Ongoing monitoring and certification enhances transparency and improvement.
- Multi-stakeholder local governance fosters replicable green solutions.

2. Maribor Public Building Refurbishment (2019)

In partnership with ENERGAP and ESCO Petrol, Maribor refurbished **24 public buildings**, achieving ~5,952 MWh/year energy savings, €446,000 yearly cost reduction, and ~1,305 t CO_2

avoided. User engagement and education were fundamental [16]

Best Practices:

- Energy Performance Contracting (EPC) reduces risk for municipalities.
- Integrating behavior change ensured sustained energy-efficient use.

6.1.3 Challenges at the Regional Level

Pomurje Region

1. High Unemployment & Financial Distress
   - Unemployment has exceeded 20%, resulting in rising reliance on social and emergency assistance, creating broader financial strain on households [17].
2. Aging Housing & Maintenance Backlog
   - A significant portion of the housing stock comprises old, poorly insulated dwellings—dampness, mold, and structural decay are reported by many residents, exacerbated by a lack of funds and renovation capacity .
3. Rural Isolation & Limited Public Transport
   - Residents depend heavily on private vehicles due to inadequate public transport, raising household energy expenses and reducing access to energy services or advice .
4. Municipal Fragmentation Reduces Capacity
   - Numerous small municipalities with limited budgets struggle to coordinate and scale energy poverty programs effectively.

Podravje Region

1. Recurring Climate-Derived Shocks
   - Environmental events (e.g., floods in 2023) disrupted electricity and heating infrastructure, requiring reactive, resource-consuming adaptation—hindering stable energy affordability programs .
2. Insufficient Long-Term Funding for Community Energy
   - While community energy cooperatives are emerging, their growth stalls due to a lack of steady funding and overly complex administrative rules .
3. Building Fabric Inefficiency
   - The region's main challenge is the prevalence of older and multi-unit housing with poor energy performance; this imposes a heavy financial burden and worsens health risks.

Cross-Regional Themes

- **Financial Constraints** across both regions limit the scope and sustainability of measures like REACH, ESINERGY, and energy cooperatives.

- **Institutional Fragmentation**—both rural isolation and multiple small municipalities—impede coherent policy implementation.
- **Climate and Cultural Vulnerabilities**—exposure to natural disasters and persistent traditional living behaviors compound energy inefficiency.
- **Awareness and Administrative Barriers**—local populations often miss or cannot navigate programs and lack ongoing institutional support.

6.2 Hungary

Hungary's main development strategy is the **National Development - 2030 National Development and Spatial Development Concept**. The vision of the concept is that aims to become one of the leading economies of Central and Eastern Europe by 2030, with a competitive economy based on sustainable use of resources, a secure livelihood for its population, a growing population, strengthened communities, improved quality of life and environmental status. To achieve this, the concept envisaged an economic and social strategic turnaround in four areas. These are reflected in the overall objectives of the concept, which are:

I. **Economic development that creates value and employment:** the aim is to increase the competitiveness of the economy, boost employment and promote sustainable growth.
II. **Demographic turnaround, healthy and renewing society:** the objective focuses on reversing demographic trends, improving health and social renewal.
III. **Sustainable use of our natural resources, preservation of our values and protection of our environment:** it aims at sustainable use and preservation of natural and cultural resources and protection of the environment.
IV. **A sustainable spatial structure based on spatial potentials:** it aims to reduce spatial disparities, create a balanced spatial structure and exploit spatial potentials.

While the concept does not identify energy poverty as a problem in its own right, it has several objectives that can contribute to reducing it. These include increasing employment, promoting social renewal, implementing environmental and climate incentives and reducing territorial disparities, which, although not directly, can help to reduce energy poverty.

6.2.1 Overview of Regional Approaches

A review of the **strategic documents of Vas County reveals** similar conclusions as for the national headline document. Energy poverty as a concept is not mentioned in any of them. The projects aimed at **developing the county's climate strategy** and raising awareness focused on climate change adaptation, risk prevention and management, environmental protection, and resource efficiency. Conferences, workshops and awareness-raising actions carried out during

the preparation of the county document have contributed to the development of a sense of social responsibility throughout the county.

In addition, a number of renewable energy projects have been implemented in the county, such as biomass, solar and geothermal energy. These developments contribute to increasing sustainability and energy awareness in the region.

Although there is no direct mention of energy poverty in public sources, the use of renewable energy sources and measures to increase energy awareness contribute to raising the energy consciousness of the population and to promoting sustainable development.

Zala County Government has created the climate strategy of Zala county, and established the climate change platform, as well. The Association of Climate-Friendly Settlements has developed a methodological guide that has served as a basis for the development of regional and municipal climate strategies, and the Association provided it to county governments, thus data collection and data analysis based on a unified methodology were facilitated. After that, the Climate Strategy of Zala County was completed.

As a result of the increase in extreme climate events, the population of Zala county, its natural and semi-natural habitats, flora and fauna, as well as its built environment will face many challenges in the coming decades. According to the climate strategy, the most important issues in Zala county are the following:

- increasing public health risks of summer heat waves;
- increase in the frequency of flash floods due to the increase in the number of high-intensity precipitation events
- vulnerability of drinking water supplies, especially in the case of water bodies based on shallow aquifers and coastal filtered wells;
- deterioration in agricultural production due to increasing drought and erosion;
- endangerment of forests as a result of the shift in forest climate classes and the emergence of new pests
- increase in the damage of buildings due to storms and heavy rainfall;
- loss of biodiversity, especially in the case of subalpine and wetlands;
- the vulnerability of outdoor recreation and tourism, especially bathing tourism along Lake Balaton.

For each identified problem area, the climate strategy sets out objectives and measures based on a detailed analysis of the situation.

6.2.2 Examples and Best Practices

The **Sustainable Energy and Climate Action Plan of City of Szombathely** devotes an entire chapter to energy poverty. The document attempts to define the scope of energy-poor households. The main criteria used to define energy poverty are the proportion of households with individual space heating and wood-burning, and the proportion of households living in rented municipal housing.

Based on this, the proportion of properties potentially affected by energy poverty is 10.18%, or 3,700 properties in the city. Multiplying this by the average population of 2.19 people gives a figure of 8,103. So potentially 10.18 %, i.e. 3700 properties and therefore 8,103 people could be affected by energy poverty in Szombathely. The rental housing stock in Szombathely consists of 2,200 dwellings, which is 6.5% of the total housing stock in the city. This relatively high figure represents a significant responsibility for the city, but also an opportunity to take action. The above figure is complemented by the number of households that received firewood from Szombathely in the last three years:

- in 2021 204 units
- in 2022 233 units
- in 2023 268 units

The dwellings covered by the social fuelwood scheme represent a fraction of the potential number of properties covered.

As described above, the city proposes to implement the following actions in energy poverty properties:

- Municipal rental housing boiler replacement and window modernisation programme
- Firewood programme plus
- Communication campaign involving the social care system

In addition, the municipality has already taken some small but important steps to increase energy efficiency. Among other things, it has implemented a LED replacement programme. In addition to the replacement programme, a Sustainable Urban Development Strategy has been developed, which aims at a comprehensive energy assessment of the city's energy use and the development of a green financing framework based on the city's green agenda.

Furthermore, the city is participating in the JUSTClimate project, which aims to achieve a socially just carbon transition through smart management tools. The project will learn about the situation of stakeholders and their climate goals through professional workshops to jointly develop feasible targets to achieve climate neutrality.

In the framework of the »Renewable Szombathely - Clean Energy from Own Power« project, three solar power plants with a capacity of 480 kWp each were installed, with a total capacity of 1440 kWp. The system will produce around 1,684,800 kWh of clean electricity per year, reducing the city's CO_2 emissions and increasing the security of energy supply.

Another good example is the housing renovation sub-programme of the economic development programme of the **municipality of Alsómocsolád**, called "Landscape of our House", which has been supporting housing renovation for more than ten years with interest-free loans and grants financed from its own and from tender sources. The programme has been extended to cover not only renovation, but also specific energy investments. In order to renovate the housing stock on the basis of an energy assessment and plan, cooperation with the Hungarian Family House Owners Association has been initiated and a Community Finance Fund is being developed to provide the necessary self-financing for renovations.

Children are at the heart of the long-term **Catching Up Settlements programme**, with the primary aim of ensuring that every household with young children has at least one properly heated, safe and healthy room. But many homes in the country's poorest villages do not meet these basic conditions. Poorly efficient wood-burning stoves often leak smoke back into the home, and poor or missing insulation, roofs and windows require significant energy inputs to achieve a minimum level of comfort. During the winter, the homes of the most vulnerable families can remain cold for long periods, causing all combustible materials to end up in the stove - when health and environmental considerations are neglected. Young children living in such conditions are more likely to suffer from asthma, other respiratory diseases and have a significantly higher risk of cancer.

Addressing the situation requires not just individual interventions, but systemic solutions that involve the whole community. Recognising this, the **Hungarian Charity Service of the Order of Malta**, in cooperation with **E.ON**, set up a **social solar power plant in Tiszabő as a model programme in 2020** as part of the Catching Up Settlements Programme. From the revenues generated from the sale of energy produced by the power plant, prepaid meters installed for local families with young children are charged in a predetermined amount every month. Although the subsidy does not fully cover the households' heating needs, it makes a significant contribution to reducing monthly energy costs.

Under the programme, safe power points with underground cables have been installed in the affected homes, and the Charity Service is also providing electric heating panels for households.

These will make heating more efficient, healthier and greener, while keeping safety a priority. The one-hectare solar power plant on the outskirts of Tiszabő will not only help reduce heating costs for families in need but will also encourage energy awareness and financial planning. The project is also of major importance for social and environmental sustainability.

Instrument	Catching Up Settlements programme
Level	National
Objective	The programme aims to reduce social inequalities, improve the quality of life of people living in poverty and promote sustainable self-care.
Key measures	The programme sets out a number of instruments, but the two most relevant to our topic are: • Improving housing: improving living environments and housing conditions. • Energy improvements: investments in energy efficiency and the use of renewable energy sources.
Target Groups	The programme's primary target group is the population of the 300 most disadvantaged municipalities, with a special focus on children, young people and unemployed adults.
Funding Sources	The programme is financed by EU funds and state pre-financing.
Monitoring & Evaluation	The implementation and results of the programme will be continuously monitored and evaluated by the Ministry of Interior and the civil and church organisations participating in the programme.

Relevant Regulation/Directive	Government Decision 1057/2021. (II. 19.) on the catching-up settlements programme

Instrument	**Sustainable Energy and Climate Action Plan of the City of Szombathely**
Level	Municipal level
Objective	Szombathely's vision is to be one of Hungary's most progressive climate-friendly cities committed to climate protection by 2030. The overall goal is for Szombathely to become a climate and energy conscious European city, taking practical environmental steps to make its living environment more liveable and more likeable. The main mitigation actions aim at developing a district heating system with a nationally superior efficiency and a high share of renewables, halving the fossil fuel intensity of institutional and residential buildings, developing local public transport with reduced emissions and increasing the share of renewable energy sources through mitigation actions.
Key measures	Local-level tools (e.g., subsidies, grants)
Target Groups	Local residents, local government, businesses, public services
Funding Sources	EU funding (e.g. LIFE, ERDF, Cohesion Fund), national funding, municipal budgets, private investment (e.g. ESCO model)
Monitoring & Evaluation	Regular review of SECAP (every 4 years) CO_2 emission reports Monitoring of KPIs and indicators
Relevant Regulation/Directive	EU Regulation 2018/1999 (Governance of the Energy Union) Paris Climate Agreement National Energy and Climate Plan (NEKT) Domestic building energy regulations

Instrument	**Renewable Szombathely - Clean Energy from Own Power**
Level	Municipal
Objective	The overall objective of the project is to contribute to Szombathely's strategic goals to reduce the city's CO2 emissions, increase the security of electricity supply, and strengthen and diversify the local economy by keeping fossil electricity spending in place.
Key measures	Construction of three solar power plants, each with a rated capacity of 480 kWp AC side, for a total of 1440 kWp
Target Groups	Economic actors
Funding Sources	The programme is financed by EU funds and municipal pre-financing.
Monitoring & Evaluation	During the preparation of the project, they faced several challenges, such as rising costs and difficulties in securing self-

	financing. The city administration is continuously working to facilitate the implementation of the project.
Relevant Regulation/Directive	Territorial and settlement development OP

Instrument	**LED Replacement Programs (Szombathely, Zalaegerszeg, Nagykanizsa)**
Level	Local initiative, only available to residents in the three towns
Objective	The aim of the programme is to reduce energy consumption, lower electricity bills and protect the environment by using energy-saving LED technology.
Key measures	Households participating in the programme will be provided with free energy-saving LED bulbs, which will result in significant energy savings when replaced.
Target Groups	The target group of the programme is all residents of Szombathely, Zalaegerszeg and Nagykanizsa who have an electricity bill and would like to participate in the energy-saving initiative.
Funding Sources	The full cost of the programme is covered by the Municipality of Szombathely, Zalaegerszeg and Nagykanizsa, in cooperation with CYEB Energiamegoldások LTD.
Monitoring & Evaluation	The success of the programme will be assessed based on the number of households registered, the number of light bulbs distributed and feedback. The aim is to achieve the widest possible participation and to continue the programme in the future.
Relevant Regulation/Directive	The programme is in line with national energy saving targets and EU environmental directives, which encourage increased energy efficiency and the use of renewable energy sources.

Instrument	**RenoPont**
Level	National
Objective	The primary aim of the online platform is to inform customers who are preparing to renovate their homes
Key measures	Advisory service, online calculator, downloadable sample documents, technical, financial and legal advice, database of professionals. An advisory office operates in Nagykanizsa by IMRO-DDKK Nonprofit Ltd.
Target Groups	Residential property owners
Funding Sources	Horizon 2020
Monitoring & Evaluation	Consumer feedback and performance measurement on the energy use of renovated buildings.
Relevant Regulation/Directive	Domestic legislation on energy renovation of residential buildings, such as programmes to improve the energy efficiency of dwellings.

Instrument	Climate strategy of the City of Nagykanizsa
Level	Municipal level
Objective	The vision outlined in the Climate Strategy states that by 2050, Nagykanizsa, as the southwestern gateway of the country, will be the decarbonized industrial, logistical, and service center of the surrounding cross-border region, an attractive city providing a high quality of life despite the inevitable consequences of climate change. By 2050, a comprehensive building energy modernization will take place in all public and privately owned buildings in the city. This will include improvements in thermal performance (insulation, window replacement), modernization and replacement of mechanical and lighting systems, installation of shading systems, deployment of renewable energy utilization systems, and an increase in the use of smart devices.
Key measures	Local-level tools (e.g., subsidies, grants)
Target Groups	Local residents, local government, businesses, public services
Funding Sources	EU funding (e.g. LIFE, ERDF, Cohesion Fund), national funding, municipal budgets, private investment (e.g. ESCO model)
Monitoring & Evaluation	The Municipality of Nagykanizsa will prepare a summary of the changes in the values of the indicators defined in the strategy according to its needs, but at least once every three years.
Relevant Regulation/Directive	EU Regulation 2018/1999 (Governance of the Energy Union) Paris Climate Agreement National Energy and Climate Plan (NEKT) Domestic building energy regulations

6.2.3 Challenges at the Regional Level

Financing investments and grants is one of the biggest challenges at both regional and local level.

If a municipality is committed to tackling housing and related energy poverty, there are tools available in the current policy and regulatory environment that it can consider in light of specific challenges and available resources.

It is important to note, however, that the situation of municipalities can vary considerably, both in terms of the nature of the problems and the resources available. The interventions described above require different levels of financial and organisational input, so they are also worth considering for municipalities with limited resources. Moreover, depending on local conditions and opportunities, additional measures can contribute to reducing energy poverty and ensuring adequate housing conditions.

The options presented are partly based on recent municipal analyses and offer suggestions in the following areas:

- Efficient management of municipal property
- Socially transparent management of the municipal rental housing stock

- Social assistance - financial and other means
- Market interventions
    - Facilitating access to grant funding
    - Housing renovation grants
    - Other market interventions
- Urban development-planning
- Rethinking organisational functioning to better address housing problems locally

The instruments listed are worth considering by local authorities in order to respond to the problems in their area. At the same time, it cannot be denied that the current options available to local authorities are fundamentally determined (limited) by the national policy environment and the lack of resources.

7. Comparative Analysis

7.1 Key Similarities and Differences

Key Similarities

Aspect	EU Level	Slovenia	Hungary
Strategic Alignment	Both countries align with EU frameworks: NECPs, EED, RED II, and Just Transition Mechanism.	Aligned with EU goals; NECP 2021–2030 and Just Transition Plan explicitly address energy poverty.	Aligned in principle through NECP and long-term strategies, but lacks concrete implementation.
EU Funding Usage	EU-level funds like SCF, JTF, ERDF support anti-energy poverty measures.	Actively leverages EU funds (e.g., Eco Fund, ERDF, JTF) for retrofits and energy community inclusion.	Utilizes EU funds via EEEOP+ and RRF but mainly for broader EE programs.
Recognition of Vulnerability	The EU promotes support for vulnerable consumers via regulation and policy (e.g., Electricity Directive).	Multiple tools target vulnerable groups, including financial aid, renovation grants, and emergency energy access.	Instruments like the utility cost reduction scheme and firewood programs aim at socially disadvantaged groups.

Key Differences

Dimension	Slovenia	Hungary
Definition and Recognition of Energy Poverty	Clearly defined in law and planning documents; criteria set in 2022; included in NECP and national strategies.	No official national definition; energy poverty is not treated as a standalone issue; data gaps persist.
Strategic Integration	Integrated into national policies (NECP, Slovenian Development Strategy, LTRS, Just Transition Plan).	Only addressed tangentially through general housing and energy efficiency strategies.
National Programs	Well-structured programs (Eco Fund grants, ENSVET advisory network, Action Plan with defined targets).	Fragmented support mechanisms; programs like "Warmth at Home" or "Utility Cost Reduction" offer short-term relief.
Regional Instruments	Targeted regional plans in Pomurje and Podravje with localized advisory hubs and project offices.	Regional initiatives like firewood subsidies are ad hoc and handled locally, with limited strategic planning.
Monitoring & Evaluation	Institutionalized mechanisms through Eco Fund and ministries with EU-aligned indicators.	Lacks cohesive monitoring system; evaluation mechanisms are limited and inconsistent.
Community Energy	Promoted via EU and national funding (e.g., Luče microgrid); focus on long-term self-sufficiency.	No notable initiatives on energy communities or decentralized RES support.
Social Policy Synergy	Strong links between energy and social support (financial, rent, emergency aid).	Social support exists but is not clearly linked to energy poverty mitigation.

Summary Table of Comparative Features

Feature	EU	Slovenia	Hungary
Policy Framework	✓	✓	Partial
Funding Access	✓	✓	✓
Definition in Law	N/A	✓	✗
Strategic Plans	✓	Strong	Weak
Regional Coordination	Promoted	Present	Minimal
Community Energy	Promoted	Yes	No
Vulnerable Group Focus	✓	✓	Partial
Long-term Vision	✓	Yes	Limited

Feature	EU	Slovenia	Hungary
Monitoring Systems	✓	Strong	Weak

Conclusions

- **Slovenia** has a **more mature and integrated approach**, with strategic frameworks, legal definitions, and robust national and regional programs targeting energy poverty.
- **Hungary**, while implementing useful individual instruments, **lacks coherence**, a national definition, and strong integration of social and energy policies—resulting in **limited long-term impact**.

7.2 Effectiveness Across Levels

This section analyzes **how effective the instruments are** at the **EU**, **national**, and **regional levels**, in terms of **implementation, coverage, targeting, sustainability, and integration**—with specific focus on **Slovenia** and **Hungary**.

EU Level

Dimension	Effectiveness
Policy Coherence	High – Clear legal and strategic framework (e.g., Clean Energy Package, Fit for 55, SCF).
Funding Mechanisms	High – Diverse instruments (SCF, JTF, ERDF, LIFE, Horizon Europe) ensure coverage across multiple needs.
Knowledge Sharing	Moderate to high – Platforms like EPAH and former EPOV promote best practices, though uptake varies.
Implementation Support	Moderate – Relies on member states' capacity to transpose policies and access funding efficiently.
Equity & Targeting	Moderate – Emphasis on vulnerable consumers exists, but actual targeting depends on national transposition.

Summary: EU provides a **strong enabling framework**, but its effectiveness depends on **national and regional implementation**.

Slovenia

Level	Effectiveness Highlights
National	**High**: Slovenia has **quantified targets** (e.g., 3.8–4.6% energy poverty by 2030), structured action plans (2023–2026), and effective funding via Eco Fund. Legislative clarity enhances delivery.
Regional	**Moderate to High**: Regions like Pomurje and Podravje benefit from tailored advisory hubs, funding, and inclusion in national strategy. Challenges remain in capacity and awareness.
Integration with EU instruments	**Strong**: Strategic use of SCF, JTF, and ERDF; Slovenia proactively **blends EU funds with national programs** for building renovation and community energy.
Targeting & Outreach	Moderate: Despite solid mechanisms, vulnerable groups often **lack awareness** or capacity to apply. Administrative complexity can be a barrier.

Summary: Slovenia demonstrates **strong cross-level coordination** and effective long-term planning, though some gaps persist in awareness and access.

Hungary

Level	Effectiveness Highlights
National	**Low to Moderate**: Lacks a national definition, unified strategy, or energy poverty-specific indicators. **Ad hoc** instruments (e.g., utility subsidies) offer **short-term relief** but no systemic change.
Regional	**Low**: Measures like firewood subsidies help rural poor, but regional governance on energy poverty is **fragmented** and **underfunded**.
Integration with EU instruments	Moderate: EU funds (e.g., EEEOP+, RRF) are used, but **not explicitly targeted at energy poverty**; low synergy with social policy.
Targeting & Outreach	Low: Lacking proper identification of affected households; no institutional tools to monitor or evaluate energy poverty-specific outcomes.

Summary: Hungary's effectiveness is **undermined by missing definitions, fragmented governance**, and weak targeting despite funding availability.

Conclusions

- **EU-level instruments** are **conceptually strong and well-funded**, but effectiveness hinges on member states' capacity to **operationalize them locally**.
- **Slovenia** is a **regional leader** in multi-level coordination and long-term planning, although **accessibility and outreach remain barriers**.

- **Hungary** struggles with **conceptual gaps**, weak integration of social and energy policies, and **short-term fixes** that limit long-term effectiveness.

7.3 Lessons Learned

The **"Lessons Learned"** reflect insights gained from the comparative implementation of energy poverty instruments at the **EU**, **national**, and **regional** levels. These lessons help identify **what works, what doesn't, and what should be improved or scaled**.

EU-Level Lessons

What Works:

- **Comprehensive Policy Frameworks**: The EU's integration of social and climate policy (e.g., via SCF, JTF, RED II) ensures energy poverty is addressed within the broader green transition.
- **Robust Funding Mechanisms**: EU-level funds (SCF, ERDF, JTF) have potential to enable deep, structural change—if well utilized.

Challenges:

- **Effectiveness Depends on Member State Capacity**: EU frameworks are only as effective as the national systems implementing them.
- **Data & Indicator Gaps**: Monitoring effectiveness across countries is limited by inconsistent definitions and reporting methods.

Lesson:

EU support is essential but **must be paired with national policy ambition, institutional capacity, and local delivery mechanisms** to produce equitable results.

Slovenia Lessons

What Works:

- **Legal Definitions + Action Plans = Clarity**: Slovenia's 2022 decree defining energy poverty and the 2023–2026 Action Plan allow for measurable progress.
- **Integrated Institutions**: Agencies like the Eco Fund and ENSVET provide financial support, expert advice, and implementation continuity.
- **Targeted Funding**: Renovation grants and support for energy communities focus on long-term, sustainable solutions.

Challenges:

- **Limited Awareness**: Vulnerable groups often remain unaware of available support or face bureaucratic hurdles.

- **Upfront Barriers**: Even with subsidies, upfront costs or administrative processes can exclude the most in need.

Lesson:

Strong institutions, legal clarity, and structured funding are key success factors, but outreach and accessibility must be improved to reach those most in need.

Hungary Lessons

What Works:

- **Short-Term Relief Can Stabilize**: Utility cost reduction and firewood subsidies offer immediate help to vulnerable groups, especially in rural areas.
- **Broad Access to EU Funds**: Hungary accesses various EU funding streams (EEEOP+, RRF), even if not well targeted.

Challenges:

- **No National Definition = No Strategy**: Lack of a legal definition prevents coherent, measurable action on energy poverty.
- **Fragmented Implementation**: No dedicated agency or plan results in duplicated efforts and weak accountability.
- **Over-Reliance on Price Controls**: Measures like utility subsidies may mask structural problems and drain public budgets.

Lesson:

Without a clear definition, dedicated institutions, or strategic goals, energy poverty cannot be addressed systematically— short-term relief must be balanced with long-term investment in housing and energy efficiency.

9. Future Directions

9.1 Emerging Trends and Innovations

This section identifies **new and forward-looking approaches** that are shaping how energy poverty is tackled, highlighting both **technological innovation** and **policy evolution**. It reflects what's already in motion or gaining traction across **EU frameworks**, **Slovenian implementation**, and **Hungarian adaptation**.

EU-Level Innovations

Trend/Innovation	Description & Impact
Social Climate Fund (SCF)	A **first-of-its-kind EU fund** that explicitly blends social and climate action—targeting vulnerable households in the green transition. Expected to deliver long-term structural relief.
Energy Poverty Advisory Hub (EPAH)	A knowledge platform offering **tools, data, and technical assistance** to municipalities and governments; enhances local capacity to design tailored actions.
Smart Metering & Digital Tools	EU policies increasingly promote **real-time energy consumption data** to identify and manage energy-poor households more precisely.
Green Social Contracts	Concept emerging in some EU discourse: linking **climate action with social equity**, ensuring vulnerable groups benefit from the energy transition.

- *Innovation Focus: Institutional & financial integration, digital empowerment, policy design.*

Innovations in Slovenia

Trend/Innovation	Examples & Impact
Community Energy Models	Projects like **Luče's energy community** (Horizon 2020 COMPILE) use **solar + storage** to empower citizens, reduce costs, and enhance self-sufficiency.
Eco Fund's Home Advisory Visits (ENSVET)	Free, on-site expert visits for energy-poor households help **translate funding into action**—a **bottom-up behavioral change** tool.
Digital Platforms for Application & Advice	The Eco Fund's **digital portal simplifies access** to renovation grants and advisory services, reducing bureaucratic barriers.
Integrated Action Plan (2023–2026)	Combines **quantitative targets**, **financial planning**, and **social inclusion** in a unified national roadmap—rare among EU states.

- *Innovation Focus: Citizen participation, tailored service delivery, regional inclusiveness.*

Innovations in Hungary

Trend/Innovation	Examples & Impact
Rural Home Renovation Programme	Combines non-refundable grants and soft loans (up to €22,500) for **deep renovations in small towns**, especially targeting families and pensioners.
Support for Families (TÁMASZ)	Focused micro-interventions (like window/roof replacement) for households in deteriorated housing—small-scale but highly targeted.
"Warmth at Home" Appliance Upgrades	Incentivizes **appliance replacement (fridges, boilers)** with more efficient models—simple but impactful for low-income households.
Decentralized Energy Communities (Early Stage)	Under EEEOP+, Hungary is exploring community energy production in carbon-intensive counties. Still early but promising.

- *Innovation Focus: Rural targeting, micro-grants, improving energy efficiency via low-tech upgrades.*

Cross-Cutting Emerging Trends

Trend	Implication
Energy Poverty as Climate Justice Issue	Increasing recognition that **just transition policies must target energy-poor groups**, not just reduce emissions.
Digitalization and Data-Driven Targeting	Smart meters, digital platforms, and EU-wide indicators help **identify needs faster and allocate resources better**.
One-Stop Shops & Integrated Services	Combining financial, technical, and social support under **single access points** (e.g., Slovenia's Eco Fund or Red Cross–partnered initiatives).
Energy Citizenship & Co-ownership	Community ownership of RES (solar, microgrids) fosters **energy autonomy** and community resilience, especially in remote or rural areas.
Adaptive Regulation	Flexible frameworks that allow **dynamic tariffs, prepayment meters, or energy-sharing models** are gaining attention for tackling structural inequities.

9.2 Recommendations for Strengthening Instruments

This section outlines **strategic and operational recommendations** to improve the **effectiveness, reach, and long-term impact** of energy poverty instruments. The focus is on **policy coherence, targeting, implementation, and innovation**, tailored to the challenges identified in Slovenia and Hungary, and aligned with EU priorities.

At the EU Level

Challenge	Recommendation
Inconsistent national implementation	**Mandate stronger alignment between NECPs and energy poverty targets**, including standardized monitoring.
Weak data comparability	**Harmonize definitions and indicators** across member states to improve cross-country benchmarking.
Underuse of EU funds by some regions	**Simplify access procedures for SCF, JTF, and ERDF** and enhance technical assistance for local authorities.
Gaps in local capacity	Strengthen **EPAH's support role** by expanding its training, tools, and tailored coaching programs.
Short-term focus	Ensure EU funding promotes **deep renovation and long-term solutions**, not just temporary price relief.

Recommendations for Slovenia

Challenge	Recommendation
Awareness and uptake gaps	**Expand outreach campaigns**, especially through social services, NGOs, and municipalities.
Upfront cost barriers	Develop **pre-financing or 100% upfront grant schemes** for the poorest households.
Limited regional staff capacity	**Scale up ENSVET advisors and project offices**, with focus on high-need rural and Roma communities.
Risk of one-off support	Encourage **multi-phase renovation support**, linked to long-term energy savings and behavior change.
Fragmentation between energy and social aid	**Better integrate social assistance with energy poverty measures**, e.g., automatic eligibility for Eco Fund grants.

Recommendations for Hungary

Challenge	Recommendation
No national definition or strategy	**Adopt a legal definition of energy poverty**, and integrate it into the NECP and national social strategies.
Fragmented and reactive policies	Develop a **dedicated, cross-ministerial action plan** with targets, funding, and monitoring.
Short-term subsidies dominate	Shift from **price controls to structural investments**, such as housing renovations and EE upgrades.
Poor targeting of vulnerable groups	Improve **data collection and vulnerability mapping**, especially in rural and Roma communities.
Underutilized community energy potential	Pilot and scale **energy communities** in rural areas using EU funds (e.g., EEEOP+), paired with training.

10. Conclusions

10.1 Key Conclusions

1. EU Provides a Strong Policy and Funding Framework

- The **EU's multi-level approach**—anchored by the **Clean Energy for All Europeans package**, **Social Climate Fund**, and **Just Transition Mechanism**—offers comprehensive guidance and financial backing.
- However, effectiveness **depends on national transposition**, political will, and local administrative capacity.

2. **Slovenia Demonstrates Strategic Integration and Institutional Maturity**

- Slovenia has **clear legal definitions**, measurable targets (e.g., reduce energy poverty to 3.8–4.6% by 2030), and robust support tools (e.g., Eco Fund, ENSVET).
- Strong coordination between **national strategies**, **regional offices**, and **EU funds** makes Slovenia a leading example of structured, multi-level action.
- Remaining challenges include **awareness**, **accessibility for the most vulnerable**, and the **sustainability of one-off subsidies**.

3. **Hungary Lacks Coherence and Formal Recognition**

- Hungary has **no legal definition** or **dedicated strategy** for energy poverty.
- Instruments like **utility cost reductions**, **firewood programs**, and **renovation grants** provide some relief, but are fragmented, **non-strategic**, and often **short-term** in nature.
- EU funds are available but **underutilized for systemic transformation**. Data, targeting, and integration with social policy remain weak.

4. **Regional Action Is Crucial but Underdeveloped**

- Slovenian regions (Pomurje, Podravje) show **early success** in localized advisory hubs and community-based actions.
- In Hungary, regional instruments exist (e.g., firewood support), but lack **strategic coordination**, **monitoring**, and **scalability**.

5. **Cross-Level Alignment and Data Systems Need Strengthening**

- Alignment between **EU, national, and local instruments** is essential to avoid duplication and ensure efficient delivery.
- Consistent **indicators, definitions, and monitoring tools** are lacking—especially in Hungary—limiting long-term policy evaluation.

10.2 Final Recommendations

For the EU

1. **Standardize Definitions and Indicators**
   - Promote a harmonized EU-wide definition of energy poverty to improve cross-country comparability and targeting.
2. **Strengthen Local Capacities**
   - Scale up support via the **Energy Poverty Advisory Hub (EPAH)** for municipalities to access technical, financial, and planning tools.
3. **Prioritize Long-Term Structural Solutions**
   - Ensure that **SCF and ERDF** funding prioritizes **deep renovation**, **renewables**, and **community energy** over temporary subsidies.

For Slovenia

1. **Expand Outreach and Simplify Access**
   - Improve communication strategies to **raise awareness** among vulnerable households, and simplify procedures for applying to Eco Fund and other schemes.
2. **Promote Multi-Phase Renovation Support**
   - Shift from one-time grants toward **multi-stage funding models** to encourage deeper and more holistic energy upgrades.
3. **Reinforce Monitoring and Evaluation**
   - Continue to refine the **targeting framework**, track results by region and group, and embed energy poverty metrics in national statistics.
4. **Scale Up Community Energy Models**
   - Build on projects like **Luče** by expanding technical and legal support for **energy communities**, especially in vulnerable or coal-transition regions.

For Hungary

1. **Adopt a Legal Definition and National Strategy**
   - Establish an **official definition** and develop a **dedicated national action plan** with targets, indicators, and timelines.
2. **Transition from Price Controls to Structural Support**
   - Phase out utility cost regulation and reallocate funds to **renovation**, **energy efficiency**, and **targeted support** for low-income households.
3. **Enhance Data Systems**
   - Develop a **national vulnerability map** using household-level data to guide targeting and policy design.
4. **Integrate Social and Energy Policies**
   - Coordinate energy poverty measures with **social welfare systems**, especially for Roma communities and rural populations.

5. **Pilot and Scale Energy Communities**
    - Use EEEOP+ and RRF funds to **launch community energy pilots** in high-poverty regions; provide legal and technical guidance to municipalities.

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