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Mapping energy poverty policies across the EU: pathways towards eco-social integration?

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Abstract

Among new socio-ecological risks, energy poverty emerges as a particularly salient issue at least in Europe, where both extreme weather events and climate mitigation policies drive up energy prices and intensify social vulnerabilities. As a response, the sustainable welfare literature emphasizes the importance of adopting eco-social policies integrating social and ecological objectives. However, policy analysis studies investigating the empirical diffusion of eco-social policies remain relatively limited. The paper addresses this gap by assessing EU member states' responses to energy poverty as outlined in their 2023 updated National Energy and Climate Plans. Specifically, relying on qualitative content analysis and an original analytical framework, this research maps the policy mixes – strategies, governance, and instruments – and the types of instruments – social, green energy, regulatory, and soft-law measures – that EU countries employ to address energy poverty (lack of adequate access to sufficient energy services). The ultimate goal is to shed light on the extent to which eco-social policy approaches are emerging. Our findings indicate that most EU countries have implemented some form of national public policies to combat energy poverty, with Hungary and Slovenia being notable exceptions. Nonetheless, significant variation exists. Notably, while some countries emphasize social policies, others prioritize green energy measures. A 'silo' approach persists in most cases, underscoring the complexity of eco-social policy integration, which is mainly pursued by some Southern European countries and Ireland through dedicated strategies.

Keywords: Energy Poverty; Eco-social Policies; Sustainable Welfare; National Energy and Climate Plans; Just Transition; European Social Policies; European Climate Policies; Comparative Policy Analysis.

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I. Introduction: eco-social risks, energy poverty policies & aims of the study

In recent years, a new field of study has been rapidly expanding, investigating the complex interconnections between social and ecological policies. The underlying intuition behind this field is that climate change and the green transition are generating a new wave of eco-social (or socio-ecological) risks for the welfare state to address (Mandelli et al., 2024.; Gough et al., 2008; Hirvilammi et al., 2023). Unlike traditional social risks, such as those connected to the industrial and post-industrial revolutions, socio-ecological risks are not just individually unpredictable but also collectively unpredictable due to the ‘super wicked’ nature of climate change (Johansson et al., 2016), which makes them more complex and ambiguous. They often go beyond the national boundaries of the welfare state, and they may even transcend individuals’ lifespans, since the greatest risks are expected to be faced by future generations.

Nevertheless, as the climate and ecological crisis accelerates, two kinds of socio-ecological risks are already emerging, calling for welfare states to put forward dedicated policy responses (Mandelli et al., 2024). The first type pertains to the direct impacts of climate change: although environmental disasters like floods, droughts, or violent storms have always existed, climate change is fundamentally altering their frequency, severity, and distribution. Besides these risks directly connected to extreme weather events, empirical evidence has clearly shown that climate policies can also indirectly create new social risks due to their regressive distributive effects. Indeed, the transition from carbon-intensive to low- or zero-carbon economies – also known as ‘decarbonisation’ – often exacerbates existing vulnerabilities or creates new vulnerable categories, affecting, for instance, workers of carbon-intensive industries, marginalised communities and low-income households, fostering perceptions of economic and political unfairness in the green transition (Galgóczi, 2022; Im, 2024). Among these socio-ecological risks, energy poverty is expected to be particularly aggravated not only by extreme weather events, which can raise the energy demand to heat or refrigerate homes, but also by climate mitigation policies, which significantly contributes to increasing energy prices.

In response to such risks, eco-social policies are gaining attention. These can be defined as public policies explicitly aiming to pursue social and ecological objectives in an integrated way (Mandelli, 2022a). By definition, eco-social policies are constructed through policy integration, which implies that these policies do not pursue social or ecological objectives on their own, but they rather aim to make these goals coherent and mutually reinforcing, boosting the synergies and tackling the trade-offs that arise when pursuing of these objectives simultaneously. Hence, eco-social policies are specifically designed to address socio-ecological risks. However, while eco-social policies are designed to tackle socio-ecological risks, traditional social or environmental policies may also be suitable for addressing these challenges without requiring the adoption of new policies.

Yet, eco-social policies are still relatively rare. An analysis of the original *National Energy and Climate Plans* (NECPs) conducted in 2022 reveals that only six EU countries have adopted comprehensive eco-social policies to address the social risks of industrial decarbonisation: Czechia, Germany, Greece, Ireland, the Netherlands, and Spain (Mandelli, 2022b). Similar empirical studies focusing on existing examples of eco-social policies are limited and mostly exploratory (Schøyen et al., 2022), whereas prescriptive approaches appear dominant (Cotta, 2024). Several scholars indeed advocate for a ‘sustainable welfare’ paradigm that should meet human needs within planetary boundaries beyond the imperative of economic growth (Hirvilammi & Koch, 2020) and underscore policy proposals like universal basic services and participation income (Büchs, 2021; Murphy, 2023).

This contribution concentrates on a specific eco-social risk – energy poverty – and aims to empirically identify and analyse public policy responses across all EU member states. By mapping these responses, the research distinguishes integrated eco-social policies from other policy approaches, particularly welfare and green energy policies. The paper focuses on public policy mixes addressing energy poverty, hence it considers the variety of policies that countries put forward with the explicit intent of addressing energy poverty (Primec & Slabe-erker, 2020). The objective is to shed light on EU countries’ different emerging pathways to pursue eco-social integration, seeking coordination between social and ecological goals, specifically in the field of energy poverty.

As detailed in the methodological section, the empirical analysis is based on a qualitative content analysis of the NECPs updated in 2023. These documents, which each EU member state was required to draft, contain a section dedicated to national policies against energy poverty. The analytical framework underlying the study, detailed in Section 4, is inspired by existing research (Mandelli, 2022b; Carrosio & De Vidovich, 2023; Bouzarovski et al., 2021; Bessa & Gouveia, 2023) and it allows to disentangle the three components of energy poverty policy mixes – strategies, governance structures, and policy instruments. It also distinguishes between different types of instruments.

This paper addresses gaps in the emerging literature on eco-social policies, where empirical comparative policy analysis studies remain scarce. It also seeks to innovate the existing literature about energy poverty policies. In particular, our work draws inspiration from, and partially aims to replicate, the publications by the *EU Energy Poverty Observatory*, which offer comprehensive data about energy poverty across EU countries (Bouzarovski et al., 2020; Bouzarovski et al., 2021). However, we aim to overcome key limitations of the Observatory’s reports, which do not specify underlying data sources, methods and analytical framework. This paper also updates the information collected by the Observatory, which was partly based on the earlier versions of the NECPs published in 2019-2020.

Like the Observatory did, this paper focuses on energy poverty policies across all EU member states, offering a broader scope compared to other studies that instead concentrate on a few

countries (Lamura, 2022; Kyprianou et al., 2019; Bridgen, 2023). Furthermore, unlike studies that rely on policy evaluation methods to assess the expected outcome of adopted policies (Bouzarovski et al., 2021; Lamura, 2022; Plumhans, 2021), this paper takes a policy analysis perspective, examining the features of policy outputs as they are explicitly presented within governmental documents.

With respect to the structure of the paper, Section 2 presents the issue of energy poverty, while Section 3 provides an overview of the policies put forward at the EU level over the years to address this issue. Section 4 presents the research design and analytical framework. Section 5 contains the main findings of our empirical analysis, identifying and describing strategies, governance and instruments to combat energy poverty in different EU countries. Finally, Section 6 discusses the findings and concludes.

1.1. What is energy poverty? An overview

Recently, the debate on energy poverty has garnered increasing attention from scholars, policymakers, and decision-makers at both national and supranational levels. Although there is no single definition of energy poverty that has gained universal acceptance over the last decade (De Vidovich, 2024), most of the existing definitions refer to a situation where households cannot adequately access sufficient energy services to meet their social and material needs (González-Eguino, 2015), or to live a decent and healthy life (Okushima, 2017). The term “fuel poverty” is often used as a synonym for energy poverty. However, the latter is a more exhaustive concept, since it includes both the availability and affordability dimensions of energy services (Okushima, 2017). In contrast, fuel poverty merely indicates the lack of affordability (Bouzarovski et al., 2012) and, as such, it has been applied primarily to the Global North context. Given its comprehensiveness, the term “energy poverty” is now arguably the most used.

Energy services such as adequate warmth, cooling, lighting, or the energy to power appliances (Sovacool, 2012) are considered basic necessities that households must access to avoid being classified as energy poor. For these services to prevent energy poverty, they must meet several essential criteria: they should be adequate, meaning suited to local geographical conditions; affordable, with costs that are reasonable compared to available alternatives; reliable, meaning free from frequent disruptions; safe, without posing health risks; high-quality, meaning efficient and versatile; and environmentally friendly, minimizing harm to the environment for current and future generations (González-Eguino, 2015).

Therefore, energy poverty is a phenomenon that is characterised by a complex and multifaceted nature, often intertwined with other broader socio-economic challenges. Addressing it requires a comprehensive approach that considers low-income levels, poor building insulation and high energy costs (Simionescu et al., 2023). Recognizing energy poverty as a systemic challenge indeed necessitates policies that integrate various dimensions, accounting at least for socio-economic factors, housing quality and the features of the energy system (Bouzarovski et al., 2021).

Regarding the causes of energy poverty, key drivers include exposure to extreme climatic events, individual vulnerability, as well as socio-political and market dynamics (Bednar & Reames, 2020; Bouzarovski, 2018). In particular, one's state of poverty and material deprivation, coupled with increasing energy prices, are crucial drivers of energy poverty, since these factors make energy services costly for households with limited financial resources (Bouzarovski, 2014). In this respect, it is crucial to highlight that climate mitigation policies, such as carbon taxes, can exacerbate energy poverty, by increasing the prices of energy and ultimately placing a higher financial burden on the shoulders of lower and lower-middle income people (Büchs et al., 2011). Energy efficiency also plays a crucial role, as residents of poorly insulated dwellings tend to face higher energy expenses to maintain adequate warmth (Bouzarovski, 2014). Al Kez et al. (2024) summarize the primary drivers of energy poverty with the “energy poverty triangle”, which refers to the combination of low income, inadequate energy efficiency, and high energy prices.

In terms of the consequences, energy poverty poses significant public health and environmental concerns (González-Eguino, 2015). It is often associated with indoor air pollution, inadequate refrigeration and heating, all of which could contribute to serious physical and mental health issues. These health challenges in turn also have an impact on other socio-economic dynamics, including reduced job productivity, diminished educational opportunities for children and adults, and increased social exclusion. On the environmental side, energy poverty can lead to deforestation, changes in land use, and heightened greenhouse gas emissions due for instance to the widespread use of polluting biofuels by low-income people around the world (Sovacool, 2012; González-Eguino, 2015).

In addition to the lack of consensus on its definition, the indicators for measuring energy poverty vary across contexts and often change over time. There are several ways to measure energy poverty (Al Kez et al., 2024; González-Eguino, 2015). First, one can rely on the self-reported experiences and evaluations of thermal comfort or access to other energy services. These indicators are subjective and dependent on how respondents interpret questions, which can vary due to cultural, climatic, geographical, and psychological factors. Second, expenditure-based methods focus on the affordability of energy services by correlating household income with energy expenses. This normally implies setting an economic threshold, that is a maximum percentage of income that should be allocated to energy costs. Finally, direct measurement methods assess energy poverty either by counting the population with access to certain energy services, or by measuring the individual level of energy consumption. This data is then compared to a predefined set of physical or technological standards to determine who qualifies as energy poor.

A widely used indicator for measuring energy poverty is the Low Income High Cost method, introduced in 2012 and currently implemented in the UK (Bridgen, 2023). This is an expenditure-based method that combines two thresholds, one for facing high costs and one for having a low income. More recently, Kashour and Jaber (2024) proposed the Composite Energy Poverty Index, which ranges from 0 to 1 and captures energy poverty as a

multidimensional issue by integrating six different indicators¹. It is also important to point out that the measurement of energy poverty differs significantly between the Global North and South. In the Global South, the issue is primarily about lack of access to basic clean energy, particularly in South and Southeast Asia and Africa. In the Global North, the focus is more on energy affordability (Al Kez et al., 2024).

The European Commission estimates that energy poverty impacts approximately 40 million Europeans (European Commission, 2023). Figure 1 illustrates the spatial variation in one of the key indicators of energy poverty in the EU – ‘inability to keep home adequately warm’ – which affected 9.3% of the total EU population in 2022.

Inability to keep home adequately warm, 2022 (% of total population)

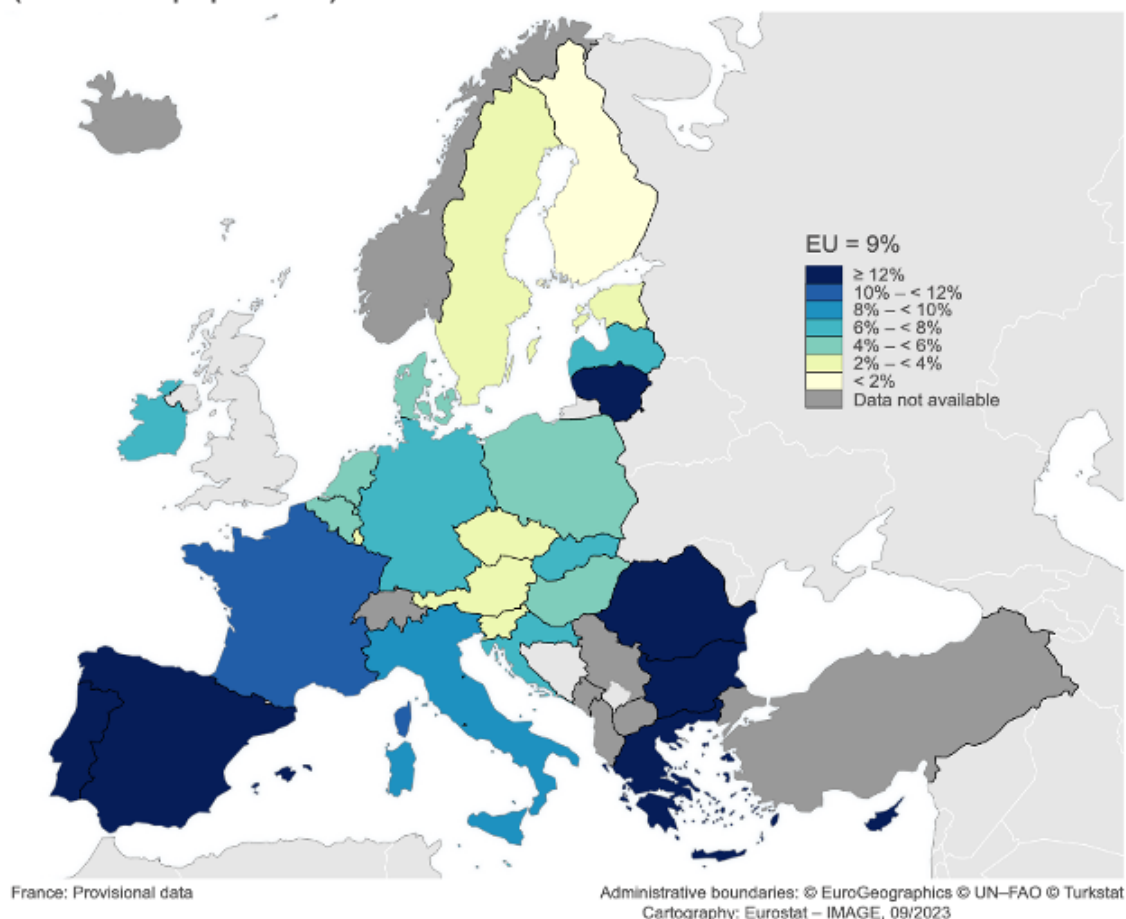


Figure 1: Energy poverty in Europe (Source: Eurostat 2023)

¹ The indicators are: 1) inability to keep the home adequately warm, 2) arrears on utility bills, 3) dwelling with leakage, dampness, or rot, 4) household energy efficiency, 5) household electricity price, 6) household annual mean income.

Finally, it is important to specify that certain groups are disproportionately impacted by energy poverty, reflecting socioeconomic disparities. In the US, low-income households, African American and Latinx communities, residents of multifamily housing, and renters bear a higher energy burden (Bednar & Reames, 2020). Within the EU, the territorial distribution of energy poverty is clearly uneven. Eastern and Southern European countries encounter more severe challenges (Kyprianou et al. 2019; Streimikiene et al., 2020). This distribution reflects the traditional economic development divide between these regions (Kashour & Jaber, 2024). It also shows that the geography of energy poverty is correlated less with climate zones and more with socioeconomic and structural factors, as exemplified by the almost-paradoxical higher ability of people to keep home adequately warm in colder European countries (Eurostat, 2023).

1.2. Energy poverty policies at the EU level

Although the main competence over energy poverty resides primarily with the member states, in the last fifteen years the EU has been progressively developing a policy framework to tackle this challenge. The first reference to the energy poverty concept in an EU legislative document came in 2009 with the *Electricity and the Gas Directives* that were part of the *Third Energy Package*. A further significant step forward came in 2016 with the publication of the *Clean Energy for All Europeans* package that introduced several soft-law measures to mitigate energy poverty (European Commission, 2016).

Part of this package, the recast *Electricity Directive* urges member states to establish criteria for identifying energy-poor households and to implement measures targeted at them, including informing customers about alternatives to disconnection. The *Energy Performance of Buildings Directive* requires prioritising worst-performing buildings and vulnerable consumers in national long-term renovation strategies. The *Energy Efficiency Directive* urges to prioritise energy efficiency savings for energy-poor households and social housing, and to consider energy poverty when implementing energy efficiency obligations. Finally, also in the framework of the 2016 package, the *Regulation on the Governance of the Energy Union and Climate Action* established a governance process to monitor and report on energy poverty alleviation efforts through the NECPs. As a side initiative, in 2016, the European Commission launched an *Energy Poverty Observatory* to promote capacity building, knowledge sharing and stakeholder engagement in the fight against energy poverty (Widuto, 2023; European Commission, 2016).

Other significant developments came with the publication of the *European Green Deal* in 2019 (European Commission, 2019). Much like previous EU grand strategies, this is first and foremost a growth strategy. However, by committing to achieve net-zero decarbonisation of EU economies by 2050, the *European Green Deal* also gives unprecedented priority to climate action, which is pursued primarily through green growth and technological innovations. This is complemented by an attention to the social implications of climate policies, expressed with

the ‘just transition’ commitment that explicitly aims to ‘leave no one behind’ in the net-zero transition.

The fight against energy poverty is presented as a crucial pillar of the ‘just transition’ framework contained in the *European Green Deal*. This was reflected in the publication of the communication *A Renovation Wave for Europe* (European Commission, 2020a), which aims to accelerate structural renovations in private and public buildings. ‘Tackling energy poverty and worst-performing buildings’ is presented as a key priority area in this communication. To deliver on such priority, in 2020 the European Commission published a *Recommendation on Energy Poverty* (European Commission, 2020b). This provides nine guidelines for member states addressing how to measure energy poverty, share best practices and use available EU funding programmes. As part of the Renovation Wave, the *Affordable Housing Initiative* was launched in October 2020 to incentivize energy renovation and the revitalization of buildings, including by offering technical assistance to 100 social housing projects (European Commission 2020a).

To achieve the EU’s target of reducing net greenhouse gas emissions by at least 55% by 2030, in 2021 the European Commission proposed the so-called *Fit for 55* package. Energy poverty is mentioned as a key objective of this package. It acknowledges that the expansion of the EU *Emission Trading Scheme* to the buildings and road transport sectors would increase the prices of fossil fuels, putting vulnerable energy consumers and transport users at risk. To mitigate this risk, the *Fit for 55* package envisaged a proposal to establish the *Social Climate Fund*, which was eventually adopted by the EU co-legislators in 2023 (European Union, 2023a).

This Social Climate Fund is specifically designed as a temporary instrument for the period from 2026 to 2032, to be funded through revenues from the new emissions trading system supplemented by national contributions, for an expected total of €86.7 billion. Member states can utilise these resources for initiatives targeting households, micro-enterprises, and transport users affected by rising prices in the building and road transport sectors. To access these new resources, national governments must draft dedicated Social Climate Plans, which can finance two types of activities. First, the fund can be used to invest in building renovation and affordable energy-efficient housing, as well as in promoting access to zero and low-emission mobility and transport. Second, member states can also harness the Social Climate Fund to provide temporary direct income support to vulnerable households and transport users to mitigate the impact of higher prices for a maximum of 37.5% of the total resources allocated nationally.

Also in 2021, the European Commission adopted another communication on *Tackling Rising Energy Prices: A Toolbox for Action and Support*, with a range of immediate and medium-term initiatives recommended to national governments to support vulnerable consumers in facing the energy crisis that erupted that year. The following year, as part of this same communication, the European Commission established a novel *Energy Poverty and*

Vulnerable Consumers Coordination Group to allow for the exchange of best practices and coordination among member states in this policy field (Widuto, 2023).

Furthermore, in response to the war between Russia and Ukraine, in May 2022, the European Commission took action to diversify energy imports, promote energy savings, and expedite the green transition through the so-called *REPowerEU Plan* (Widuto, 2023). This Plan was accompanied by a legislative proposal, which eventually led to the amendment of some of the key pieces of EU legislation addressing energy poverty. First, the updated *Energy Efficiency Directive* was approved in September 2023. This amended directive notably provides an EU-wide definition of energy poverty, which is the following: “a household’s lack of access to essential energy services, where such services 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, existing national social policy and other relevant national policies, caused by a combination of factors, including at least non-affordability, insufficient disposable income, high energy expenditure and poor energy efficiency of homes” (European Union, 2023b: art. 2.52). The *Energy Efficiency Directive* also notably urges member states to target a share of their national energy efficiency measures to low-income groups and social housing. However, there is no binding indication on the amount and type of national measures needed, nor any ad-hoc EU fund associated with the directive.

In May 2024, the amended *Energy Performance of Buildings Directive* was published, requiring EU countries to incorporate strategies to reduce the number of individuals experiencing energy poverty in their *National Building Renovation Plans* and in other related national measures (European Union, 2024). The following month, the *Electricity and Gas Market Reforms* were put forward, strengthening consumer rights and protection. Additionally, in the event of a natural gas price crisis, EU countries are now required to guarantee access to affordable energy and essential social services for vulnerable groups, including through price control measures (European Commission, 2024).

Finally, in October 2023, a new *Commission Recommendation on Energy Poverty* was released, accompanied by a dedicated guidance document. Compared to the 2020 Recommendation, the 2023 version provides more detailed guidance to member states on how to address energy poverty. The recommendation is organised around the following thematic sections: i) implementation of the legal framework; ii) structural measures, affordability and access to energy; iii) governance, iv) trust, engagement and communication; v) energy efficiency; vi) access to renewables; vii) skills; and viii) financing (European Commission, 2023).

Summing up, in the past fifteen years, the European Union has progressively increased its competences over the governance of energy poverty. This has been achieved mostly through soft-law measures, such as recommendations or monitoring mechanisms, but also through innovative funding mechanisms, notably the *Social Climate Fund*.

1.3. Research design & analytical framework

In this paper, the empirical analysis of energy poverty policies in EU member states is based on the NECPs². These are multi-year plans covering the period from 2021 to 2030 and aiming to monitor member states' performances towards the Energy Union's objectives, particularly in the areas of decarbonisation, energy efficiency, and renewable energy. EU countries submitted a first version of the NECPs as a draft at the end of 2018, followed by a final version between 2019 and 2020, incorporating the European Commission's recommendations. Member states were required to submit a draft updated version of their NECP in June 2023, which was followed by country-specific Staff Working Documents of the European Commission providing a technical assessment of the drafts. Although the deadline for submitting the final updated NECP was June 2024, at the moment of writing (September 2024), not all final versions have been submitted. Thus, for our analysis, we have used the final updated NECPs only where available, otherwise we relied on the draft updated versions.

The NECPs have been selected as reference documents because they shall contain information about energy poverty policies in each EU country. Indeed, according to Article 3.3. of the *Regulation on the Governance of the Energy Union*, "in the event that a Member State finds [...] that it has a significant number of households in energy poverty, on the basis of its assessment of verifiable data, it shall include in its plan a national indicative objective to reduce energy poverty. The Member States concerned shall outline in their integrated national energy and climate plans, the policies and measures, which address energy poverty, if any, including social policy measures and other relevant national programmes" (European Union, 2018: Art. 3.3). Specifically, subsections 2.4.4. and 3.4.4. of the NECPs are dedicated to energy poverty, the first outlining national objectives and the second section presenting available measures and policies.

Methodologically, we rely on policy analysis tools. In particular, from each NECP, we extracted information about the policies that national governments *explicitly* frame as relevant to address energy poverty. As such, our analysis concentrates on the explicit features of policy outputs. This methodological choice has the advantage of allowing us to systematically capture what states are doing to address energy poverty. Instead, the evaluation of policy outcomes – notably the effects of existing policies on reducing energy poverty or achieving other eco-social objectives – falls outside the scope of the paper, although further research would be needed to investigate this important aspect. We identified both existing initiatives

² The National Energy and Climate Plans, in draft and final version, as well as original and updated version are available here:

https://commission.europa.eu/energy-climate-change-environment/implementation-eu-countries/energy-and-climate-governance-and-reporting/national-energy-and-climate-plans_en (last accessed: 13 Feb 2025).

and announced commitments, but we excluded policies that are described vaguely, such as statements only mentioning goals without providing details about policy design and implementation. We conducted a qualitative content analysis of subsections 2.4.4. and 3.4.4. of each NECP. We also performed a keyword search of the term ‘energy poverty’ throughout the texts of the NECPs. Finally, in order to check for eventual developments over time, we also reviewed the subsections dedicated to energy poverty in the original version of the NECPs, submitted in 2019 and 2020. The information retrieved in this mapping exercise is summarized in the Annex below, which contains a table for each EU country.

The empirical analysis is guided by an analytical framework, constructed on the basis of some key dimensions identified by existing studies. First, we build on the idea that energy poverty policies often come as policy mixes, comprising a set of different components interacting with one another (Bessa & Gouveia, 2023). Three components appear particularly relevant: i) *strategy*, meaning an action plan defining the overarching goals and problems to be addressed; ii) *governance*, referring to institutional structures or procedures that grant powers to governmental and non-governmental actors in the implementation of the policy mix; and iii) *instruments*, referring to a set of policy tools targeting an identified subset of the population (Mandelli, 2022b).

In an integrated policy mix, we assume, these three components are all present and explicitly interact with one another in a way that goes beyond the mere accumulation of separate policy instruments. The assumption is that policy integration is achieved only when a strategy and governance components are there to ensure coherent interaction between policy instruments and avoid possible inconsistencies. When this does not occur, hence when different policy instruments remain disconnected from one another and are not incorporated into an overarching strategy and/or governance structure, then eco-social policy integration will likely not occur, since this presupposes an expressed intent to bring together social and ecological objectives and create synergies. Thus, only comprehensive policy mixes encompassing all three components are here considered examples of pure eco-social policy integration. We therefore disentangle these three components of the energy poverty policy mix (where available) in our analysis of the NECPs.

Second, we build on studies that have identified a variety of possible policy responses to energy poverty (Carrosio & De Vidovich, 2023; Bouzarovski et al., 2021; Bessa & Gouveia, 2023; Kyprianou et al. 2019) in order to further break down the instrument component. All of these studies seem to agree on which are the most common policy tools used to combat energy poverty and they also often highlight policy targets. Thus, we build on their insights to propose a typology of six policy instruments addressing energy poverty: 1) *Targeted social policies*, such as bonuses, vouchers, tax deductions and other forms of monetary support directed to vulnerable consumers to help them pay their energy bills; 2) *General social policies*, that are not specifically targeted to vulnerable energy consumers but are still regarded as contributing to combat energy poverty; 3) *Targeted green energy policies*, providing investment in energy

efficiency (building insulation and/or appliances) or renewable energy for vulnerable consumers or social housing; 4) *General green energy policies*, that are not specifically targeted to vulnerable consumers but are regarded as contributing to combat energy poverty; 5) *Regulatory and market instruments*, that address energy poverty by imposing rules on energy providers, including banning or preventing consumer disconnections from energy services and regulating energy prices in the market; 6) *Soft-law policy instruments*, such as advice, awareness-raising, training and communication initiatives for vulnerable consumers.

The first four types of policy instruments are particularly relevant for the purposes of this study, given its primary focus on eco-social policy integration. Indeed, mapping these four instruments allow us to assess whether energy poverty in a certain country is addressed predominantly through social or green energy policies, or a mix of the two (Princ & Slabe-Erker, 2020; Pye & Dobbins, 2015). Nonetheless, regulatory-market instruments and soft-law measures are also noteworthy, as they can serve as complements in advancing both social and environmental objectives. Furthermore, although it falls outside the scope of this paper, it is important to note that the choice of policy instruments has implications beyond energy poverty, notably on the distribution and accumulation of wealth (Carrosio & De Vidovich, 2023), as well as on distributive and procedural justice (Bouzarovski et al., 2021; Lamura, 2022).

For each component of our analytical framework, a positive score (+) was assigned to a country if its NECP references adopted energy poverty policies, whereas a negative score (-) indicates their absence. An uncertain score (?) was given if a country's NECP mentions plans to implement policies against energy poverty in the future, but these currently remain mere commitments. Although our core focus is on national policy mixes, in the country-specific analysis of the NECPs, we also checked whether EU policies and local-regional policies are mentioned among the tools to address energy poverty. Additionally, as done in other studies (Bouzarovski et al., 2020; Bessa & Gouveia, 2023), we assessed whether there are official definitions and indicators to measure energy poverty at the national level. Information on these additional dimensions is provided in the Annex.

In conclusion, some key limitations of relying solely on the NECPs for our content analysis should be acknowledged. For instance, we considered energy poverty policies as they are described in the NECPs, rather than by referring to original policy documents. Although this methodology suits the comparative ambition of the paper, it risks being incomplete, as the NECPs might not include crucial details about the policies that they mention, or they might omit some policies entirely. The data from the NECPs might also be deficient due to the unavailability of some final updated NECPs and due to the fact that these were translated into English using machine translation.

1.4. Strategies, governance and instruments to combat energy poverty in 27 EU countries

This section reports the findings of the analysis of energy poverty policies in the NECPs, organised around the three components of the analytical framework presented above: strategy, governance and instruments. The latter component is further broken down into the six instrument types, as defined in the previous section. Table 1 summarizes the findings.

EU Countries	Strategy	Go- vernance	Instruments					
			Targeted social	General so- cial	Targeted green	General green	Regulatory or market	Soft-law
AT	-	-	+	+	+	+	-	+
BE	-	-	+	-	-	-	+	-
BG	-	?	+	-	?	-	-	+
CY	-	-	+	-	+	+	+	-
CZ	-	-	-	?	-	+	?	+
DE	-	-	+	+	-	-	+	+
DK	-	-	+	+	-	+	-	-
EE	-	-	+	+	-	+	+	-
EL	+	?	+	-	?	+	-	?
ES	+	+	+	-	?	+	+	?
FI	-	-	+	+	+	+	-	-
FR	-	+	+	-	+	+	+	+
HR	?	?	+	-	+	-	-	-
HU	-	-	-	-	-	-	-	?
IE	+	+	+	+	+	+	+	+
IT	?	+	+	-	+	+	-	-
LT	?	-	+	-	+	+	-	+
LU	-	-	?	-	+	+	-	+
LV	-	-	+	?	?	-	+	-
MT	-	-	+	-	+	-	-	+
NL	-	+	-	?	-	+	+	+
PL	-	-	?	-	+	+	-	?
PT	+	?	+	-	+	+	-	?
RO	?	?	+	+	-	-	+	+
SE	-	-	+	+	-	-	-	+
SI	?	?	?	-	?	-	-	?
SK	-	+	+	+	+	+	+	?

II. The strategy component

Only a few EU countries have put forward strategies setting up overarching objectives or targets, as well as dedicated plans or programmes of action, to combat energy poverty at the domestic level. These kinds of strategies can be found in Greece, Spain, Ireland, and Portugal, whereas Croatia, Italy, Lithuania, Romania and Slovenia have committed to developing a strategy. In most cases, energy poverty strategies enlist and seek to coordinate the various national policy instruments aimed at alleviating energy poverty, thus fostering policy integration in this field. The Spanish, Irish and Portuguese strategies organise these measures around different priority areas.

In Spain, the government has adopted a *National Strategy against Energy Poverty* in April 2019, providing a reference framework for actions in this area. The Spanish Strategy sets up four key objectives: i) improving awareness; ii) improving the response to the current situation; iii) creating a structural change to reduce energy poverty; iv) protecting consumers and raising social awareness. The Spanish NECP also states that the government is preparing an *Operational Plan*, aimed at deploying actions, developing impact and performance indicators, as well as other monitoring tools in order to implement the national strategy in the period between 2023 and 2024.

Ireland's strategy to combat energy poverty is laid out in the *Energy Poverty Action Plan*, which was published in December 2022. It was developed by a cross-departmental and inter-agency Steering Group (see more details below). Much like in Spain, also the Irish Plans identifies specific areas of action to combat energy poverty: i) meeting the cost of energy; ii) energy efficiency; iii) research; iv) governance and communications.

In Portugal, the *National Long-Term Strategy for Combating Energy Poverty* was published in late 2023 and it is meant to contribute to the parallel *Just Transition Strategy*, which the government committed to develop. The Portuguese Strategy mentions the following objectives: i) obtaining a diagnosis and characterisation of the problem; ii) developing monitoring indicators; iii) monitoring strategies; iv) setting medium and long-term energy poverty reduction targets at the national, regional and local level; and V) proposing specific measures to achieve these objectives, as well as forms of financing.

Greece's *Action Plan for Combating Energy Poverty*, adopted in 2021, stands out compared to the Spanish, Irish and Portuguese strategies, as it sets quantitative targets for reducing energy poverty. These targets aim for a 50% reduction in 2025 and 75% by 2030 compared to the levels registered in 2016. The Greek plan also defines households affected by energy poverty and lists all the available schemes to address the issue. Finally, the plan envisages a monitoring and control mechanism with annual progress reports to assess and improve existing policies.

Besides the countries that have adopted a strategy to combat energy poverty, a few other NECPs mention national commitments to develop similar strategies. First, Lithuania has set targets to reduce energy poverty in the population by 2030, which are contained in the 2021 *National Progress Programme*, a broader agenda of policy objectives in the social, economic,

environmental and security areas. These targets include decreasing the share of the population ‘unable to keep their home adequately warm’ from 28% in 2018 to 17%, as well as those who spend ‘a significant share of their income on energy expenditure’ from 17.1% in 2018 to 10%. However, these targets are not associated with a specific plan or strategy like in Greece, Spain, Ireland and Portugal. The Lithuanian NECP rather presents a generic commitment to seek policy coherence and promote a cross-sectoral approach in the fight against energy poverty.

The Slovenian NECP commits to set up an *Energy Poverty Alleviation Scheme* (also referred to as *Action Plan*) encompassing all measures in this field. Planned actions include investment incentives in energy efficiency and renewables, as well as advice, information and awareness-raising targeted to energy poor consumers. The Slovenian strategy will also incorporate the following targets mentioned in the NECP: i) reducing the share of households in energy poverty between 4.6% and 3.8% by 2030; and ii) implementing 3.500 and 10.500 investment [projects] in energy efficiency and renewable energy use by households in energy poverty by 2030.

Similarly to Slovenia, Croatia committed to developing by the end of 2024 a *Program for Elimination of Energy Poverty*, which will feature the following elements: a definition of energy poverty; an evaluation of the scope and socio-economic characteristics of energy poor households; the objectives of measures to combat energy poverty; indicators for monitoring the success of the implementation of the program; energy consulting for all energy-poor citizens; a system of measuring and monitoring energy poverty indicators; and a system of increasing energy efficiency at the level of energy-poor households.

Finally, the Romanian NECP also features a vague commitment to prepare a national action plan for energy poverty, which would define the consumers who cannot be disconnected in critical situations and specify the recovery of related costs by operators. Similarly, in Italy, a 2021 decree provides for the drawing up of a national strategy to combat energy poverty based on the work of the *National Energy Poverty Observatory*, which should include periodic targets and planned actions. However, no further details are provided in the two NECPs.

With respect to the scope of existing or proposed energy poverty strategies, most aim to combine short-term objectives – which should have a more lenient and palliative nature – with medium-run or long-run ones, which are instead deemed more structural and developmental. For instance, the Spanish strategy and the proposed Slovenian strategy have relatively short time spans, running respectively until 2025 and 2026. However, both Spain and Slovenia commit to develop new periodic plans after the current deadlines in order to renew their strategic objectives. The Irish plan focuses mostly on short-term measures to be implemented during winter 2022/23, but it also features longer-term actions. The Portuguese and Lithuanian plans have a longer time frame, until 2050, although Lithuania has also set medium-term targets for 2025 and 2030.

Although energy poverty strategies are relatively rare across Europe, this does not necessarily imply that an integrated approach is always lacking. For instance, although Germany lacks a proper strategy, the respective NECP specifies that the Federal Government is taking a

comprehensive approach to combating energy poverty. Similarly, the Dutch NECP mentions that the country is applying a programmatic approach to the acceleration of the energy transition, including but not limited to energy poverty policies. Conversely, other NECPs expressly refrain from adopting an integrated approach. For example, Sweden states that it does not distinguish energy poverty from poverty in general and, for this reason, it does not provide a definition of the term energy poverty nor specific objectives.

Some countries, despite lacking proper comprehensive strategies, have adopted legal definitions or commitments. In France, the *Law on a National Commitment to the Environment* adopted in 2010 introduced the concept of energy poverty in the national legislation. Similar legal definitions were put forward in Luxembourg, through a 2007 *Law on Electricity and Gas Markets* and a 2009 *Law on Social Assistance*, as well as in Estonia with the *Energy Economy Organisation Act*, revisited in 2019, and the *Wellbeing Development Plan 2023-2030*, which sets targets for the reduction of poverty in the country. Finally, it is worth noting that in Belgium no federal energy poverty strategy is recorded, but the regional government of Flanders has taken action through *Flanders' Energy Policy Document 2019-2024*, which sets out the region's ambitions to shape a socially just energy transition, including by strengthening responses to energy poverty.

III. The governance component

In most EU countries, the governance of energy poverty policies is delegated to one or more ministerial bodies, usually those with competences over energy or social policies. In these cases, we can argue that a dedicated and integrated approach to governing energy poverty is missing. Instead, a few countries have set up governance mechanisms or structures for the implementation of energy poverty policies. These include facilities for inter-ministerial coordination and/or stakeholder engagement. Such governance tools can already be found in France, Ireland, Italy, the Netherlands, Spain and Slovakia.

The Italian, Irish, Spanish and Slovakian governments set up interministerial bodies specifically dedicated to monitor and implement energy poverty measures. In Italy, the *National Energy Poverty Observatory* was established in March 2022. It consists of a collegiate body with six members: two members appointed by the Minister for the Environment and Energy Security, including the President, one by the Minister for Labour and Social Policy, one by the Minister for Infrastructure and Transport, one by the Conference of the State Regions and Autonomous Provinces and one by the Regulatory Authority for Energy Networks and Environment. This interinstitutional platform is tasked to design and monitor the effectiveness of measures to combat energy poverty, attempting to overcome the fragmented nature of these measures. Although the NECP mentions that the Italian observatory may also take initiatives to consult and cooperate with other stakeholders, governance powers remain primarily concentrated in the hands of the government.

Ireland created a cross-departmental and inter-agency *Steering Group* which has been meeting regularly since August 2022. The Group is chaired by the Department of Environment, Climate and Communications and it includes various other state departments (including Social Protection, Health and Housing), as well as national energy regulators and authorities, and the Economic and Social Research Institute, which is responsible for conducting empirical research on the topic. The Steering Group is tasked with monitoring the country's progress in the implementation of the Energy Poverty Action Plan and, like in the Italian case, this is done by pursuing a structured and whole-of-government engagement with stakeholders, which entails the organisation of an annual event with stakeholders and an annual report process.

Slovakia established a cross-ministerial group in 2023 to provide proposals on the definition of energy poverty and related measures. The group is composed of relevant central government bodies, including social and family affairs, finance, the economy, and the environment. Similarly, the Spanish NECP mentions that the implementation of the *National Strategy against Energy Poverty* occurs in a coordinated way, involving general state administrations – such as the Ministries of Ecological Transition; Economy; and Social Security – autonomous communities, local authorities and sectoral associations.

Following the EU example, the Netherlands and France established research institutes tasked with evaluating the national energy poverty situation and policies. The Dutch NECP states that the Dutch Organization for Applied Scientific Research has been investigating energy poverty since 2018 and, in 2022, it launched a *National Energy Poverty Research Programme* in cooperation with the Ministry of Economic Affairs and Climate Policy, the Ministry of the Interior and Kingdom Relations and the Ministry of Social Affairs and Employment. This programme aims to monitor energy poverty on a national and local scale, exchange knowledge and ultimately develop policies to combat this phenomenon. Furthermore, also in 2022, the Central Statistical Office was delegated to develop an annual Energy Poverty Monitor.

In France, the *National Observatory for Energy Precarity* has operated since the 2010s with the aim to monitor and analyse energy poverty and the arrangements put in place to combat this phenomenon. Notably, the French observatory has developed a basket of indicators to characterise and quantify consumers' vulnerabilities related to housing and mobility. The French observatory conducts regular monitoring of such indicators, which is published as part of a scoreboard.

Besides existing governance structures, the Bulgarian, Croatian, Greek, Portuguese, Romanian and Slovenian NECPs feature commitments to set up similar structures in the future. In Croatia, the government has committed to organise open partner dialogues on energy poverty, while also raising awareness and building capacity on energy poverty through local information centres involving energy poor citizens. The Bulgarian NECP features several commitments. The first is to set up an interministerial group involving the ministries of Finance, Social Policy, Regional Development and Energy, with the support of an international financial institution. This group should oversee the implementation of national

and EU energy poverty policies. Furthermore, the Bulgarian NECP also proposes to establish an observatory to be financed through EU and national resources, bringing together a wide community of practitioners, officials and researchers to coordinate the implementation of policies and measures. Finally, Bulgaria also pledges to set up a Knowledge Centre for information and analysis, as well as to provide a forum for stakeholder discussion.

The Portuguese NECP commits to establish a *National Energy Poverty Observatory* in 2024 in the framework of the proposed *Long-Term Strategy for Combating Energy Poverty*. This observatory should provide a public digital platform for data collection and processing, based on an annual survey tool. The idea is to contribute to monitoring the effectiveness of existing public policies. In the Greek NECP, there is a vague commitment to actively involve affected parties, in particular local and regional authorities, in the implementation of energy poverty measures and the identification of affected households. An equally vague commitment is featured in the Romanian NECP, which states that the Ministry of the Economy, Energy and the Business Environment should collaborate with the Ministry of Labour and Social Protection for the development of the proposed action plan. Finally, Slovenia commits to establish a *Strategic Energy Poverty Council* as part of the foreseen *Energy Poverty Action Plan*, as well as local advisory network.

IV. The instruments component

Most EU countries have adopted some policy instruments to address energy poverty, except Hungary and Slovenia. We find that instruments vary considerably across the EU, with different member states adopting different tools targeting different subsets of the population.

Most EU member states have adopted targeted social protection measures aimed at financially supporting vulnerable consumers with their energy bills. This is the most common instrument type that we identified, as it is mentioned in all NECPs, except for six: the Czech, Hungarian, Luxembourgian, Dutch, Polish, and Slovenian ones. Targeted social instruments come in different forms. For many countries it is a subsidy or direct monetary support. Denmark provided one-off income support to low-income households through financial assistance for household electricity costs via the *Varmechecken* programme in 2022, while also offering a heating supplement and personal allowances for pensioners, people with disabilities, single parents, and financially vulnerable families with children. Belgium has had a federal social tariff for electricity and natural gas for years, supporting low-income consumers. Ireland provides income support to households that are eligible for social assistance through the *Household Benefits Package* and the *Fuel Allowance*, offering monthly and weekly support during the winter season. Similarly, Lithuania provides financial reimbursement of a share of heating and water costs for disadvantaged households. Cyprus also protects vulnerable electricity customers by reducing prices (20% lower than average) through a dedicated tariff. Malta offers a direct reduction in utility bills for vulnerable households through the so-called

Energy Benefit Scheme. Portugal has a *Social Energy Tariff* to reduce the energy burden of household consumers. Romania grants aid for heating homes and for energy consumption which is channelled to an estimated number of 500,000 households, with a level of assistance that depends on their income and heating systems.

Another type of targeted social instruments found in our analysis of the NECPs are voucher programs used to help vulnerable households manage their energy bills during periods of high costs or energy crises. Spain provides a social voucher for electricity discounts, which was introduced in 2013 and reformed in 2022. Similarly, Croatia has a voucher system that compensates vulnerable customers for supplementary charges imposed by suppliers on top of the price of electricity, whereas Greek vulnerable consumers can benefit from an energy card. Finally, France's energy voucher, which is sent automatically to lower-income households, ranges from €48 to €277 and was exceptionally boosted between 2022 and 2023.

Some EU countries address energy poverty through broader social policies that are not specifically targeted to vulnerable energy consumers. The Austrian and Swedish NECPs mention general welfare schemes like minimum income support, acknowledging that these can help low-income households cover various living costs, including energy bills. Other Nordic countries like Finland and Denmark, as well as Eastern European countries like Slovakia and Romania, recognise the importance of existing welfare policies in addressing energy poverty. The German NECP states that, in response to growing energy prices, in 2022 the government increased the minimum wage, childcare benefits, and the basic tax-free allowance. Also included under general social policies are temporary measures granting immediate relief for high energy bills to the whole population, regardless of income. These universal measures can alleviate energy price hikes across the board during periods of crises, but they risk benefiting wealthier households disproportionately. In Estonia, some temporary measures were implemented in the winter of 2022-2023, partially compensating all customers for electricity, gas, and district heating bills. In Ireland, the *Electricity Costs Emergency Benefit Schemes* provided a total of €2.9 billion for electricity credits to every household (€137.64 each) in 2022 and 2023.

Green energy measures are identified in several NECPs as tools to address energy poverty through long-term reductions in energy consumption via building insulation, investments in energy-efficient appliances, or renewable energy. Overall, these instruments are mentioned among the tools to combat energy poverty in most NECPs except for Belgium, Bulgaria, Germany, Hungary, Latvia, Romania, Sweden, and Slovenia. However, only in some countries are these instruments targeted specifically to vulnerable consumers and/or to the energy poor. For instance, Ireland subsidises energy efficiency home upgrades for lower-income households through the so-called *Better Energy Warmer Homes Scheme* and supports measures such as insulation and heating upgrades. In Croatia, the *National Energy Efficiency Action Plan 2022-2024* promotes building renovations through the use of renewable energy sources in assisted areas and areas of special state concern. Lithuania promotes the installation of solar power plants and the replacement of fossil fuel-based heating systems within deprived communities, while

Cyprus has financial incentives in place for vulnerable consumers to install photovoltaic systems. Furthermore, Portugal outlines a strategy to improve thermal comfort in housing for economically vulnerable households through the *Valle Efficiency* program.

Another type of targeted green energy instruments are investments in the energy efficiency of social housing or in renewable energy communities for vulnerable consumers. In Slovakia, the *Home Light Recovery programme*, set up under the *REPowerEU* programme, should allow 100 % funding for the comprehensive renovation of social housing. Finland's *Housing Finance and Development Centre* provides subsidies for renovation projects in social housing. Italy also initiates social housing interventions through the so-called *Termico Account*, which offers financial support to install photovoltaic panels, covering up to 100% of the costs. The NECPs of some Southern European countries, like Greece, Spain, Portugal, and Italy, encourage the formation of (renewable) energy communities or self-consumption facilities for vulnerable consumers, which are presented as important tools to combat energy poverty. However, no specific measures are mentioned, as this appears to remain just a vague commitment.

Some green energy measures are listed among the instruments to combat energy poverty in several NECPs, despite often not being targeted to vulnerable consumers, but rather benefitting a broader subset of the population, if not all citizens. For instance, Czechia implements the *New Green Savings Light* program, which provides public funds to help reduce housing renovation costs and improve energy efficiency. In several countries, targeted and non-targeted green energy instruments co-exist and are often funded within the same programme. For example, Austria offers housing subsidies for energy efficiency improvements, particularly targeting low-income households. Through *Energy Saving Certificates*, France requires energy suppliers to finance a certain amount of energy renovation works, while the *MaPrimeRénov* directly finances energy efficiency upgrades for low-income households. Besides the *Termico Account* described above, Italy also has tax deductions in place for the energy retrofitting of buildings through the *Ecobonus*, which is available to all citizens. Poland funds programmes aimed at co-financing retrofitting and green modernisation measures in private homes, whereas its *Stop Smog* programme implements low-carbon projects for the least affluent in single-family dwellings.

Besides purely social and green instruments, regulatory-market and soft-law measures are also presented in various NECPs as essential tools to combat energy poverty. Although these measures are not (re)distributive nor do they promote energy savings or renewables, they can complement other instruments by contributing to generating positive social and/or environmental outcomes. Regulatory measures address energy poverty mainly by preventing disconnection from energy services and by regulating the increase in the price of energy in the market. France implements a winter truce between November and March, when energy suppliers are prohibited from disconnecting customers of natural gas and electricity and the country also limits energy price increases through tariff shields. Greece's social tariff scheme includes regulatory measures to prevent energy disconnection, which are presented as complementary to existing social protection

mechanisms. Estonia protects consumers from heat supply interruptions during the colder months through its *District Heating Act*, obliging energy suppliers to wait 90 days before interrupting heat supply in case of debt during the winter. Belgium, Cyprus, the Netherlands, Ireland, Romania and Spain also protect their vulnerable households against disconnection by imposing obligations on energy suppliers and network operators.

Instruments aiming to regulate the prices of energy in the market are found in Germany, France, Ireland, Latvia, the Netherlands, Romania, and Slovakia. The German government introduced price brakes for gas and electricity in 2023 to face the energy crisis, while Ireland put forward a cap on the market revenues of some generators in the electricity sector also as a way to cope with the energy crisis. Similarly, the Netherlands adopted a temporary price cap in 2023 for retail consumers for gas, electricity and heat, whereas in Romania two 2022 *Emergency Ordinances* established a 1-year cap on electricity prices as well as consumption ceilings. In Latvia, a reduced VAT rate for the supply of wood fuels and heat is in place until no longer necessary.

Finally, soft-law instruments, providing advice and information about energy-saving practices to energy poor consumers, are enlisted among the measures addressing energy poverty in several countries. Germany runs the *StromsparCheck* program, which offers low-income households suggestions on reducing their energy consumption and provides free energy-saving products. Similarly, the Netherlands provides an advisory service contained within the *Energy Fixers* program, where volunteers and professionals give targeted assistance. Lithuania and Austria also have similar initiatives, offering advice to households on improving energy efficiency and managing energy consumption. Malta provides free professional advice to vulnerable and low-income households about energy efficiency and behavioural change. These soft-law measures, although important for raising awareness and improving energy behaviours, are often supplementary and arguably rely on households' ability to make changes based on the advice provided.

Besides already adopted policies, several NECPs commit to put forward instruments against energy poverty in the future or they feature vague pledges to address this phenomenon. Bulgaria, Greece, Latvia Spain, and Slovenia are examples of countries that have set commitments related to green energy measures, without providing specific details on these measures. Bulgaria has vaguely committed to foster long-term investments in energy efficiency and social housing renovations and Greece has similarly made broad commitments to upgrading residential buildings and promoting renewable energy systems. The Latvian NECP commits to provide support to citizens at risk of energy poverty as part of energy efficiency operations in multi-apartment buildings.

Regarding social policy commitments, Poland and Slovenia generally have pledged to support low-income households through social assistance but have not outlined specific measures. In Luxembourg, people who fulfill the conditions for eligibility for social assistance are entitled to a minimum supply of domestic energy if they are unable to cover the cost of their domestic energy,

but this does not translate into a specific financial benefit. The Netherlands has committed to develop additional policies on housing, care, and energy to increase the availability of social housing and protect low-income households. Finally, Hungary has acknowledged the need for measures providing advice to vulnerable households on energy savings, albeit not implemented yet.

In conclusion, it is worth pointing out a couple of important findings that emerged from our empirical analysis. First, importantly, the instruments identified in our mapping exercise vary considerably with respect to their time frame, with some offering temporary relief and others being designed as permanent solutions. Short-term measures, such as France's tariff shields and Estonia's temporary household electricity compensation, respond to immediate crises like the recent surge in energy prices during winter months. This recent crisis that invested the whole EU in 2022, especially after the start of the war in Ukraine, has arguably resulted in the proliferation of temporary mechanisms to cushion price increases. In contrast, permanent programs, such as Austria's housing subsidies for energy efficiency improvements and Ireland's *Better Energy Warmer Homes Scheme*, focus on providing ongoing support through financial aid or energy efficiency investments. Second, although our empirical analysis focuses on national-level policies, local-regional measures, and EU policies – especially the *Social Climate Fund* – are often mentioned in the NECPs as crucial elements complementing, and sometimes substituting, the national policy mix.

V. Discussion & conclusions

Energy poverty is emerging as one of the most politically salient socio-ecological risks, raising concerns about the emergence of new inequalities created by climate change and regressive climate policies. Aspiring to contribute to the emerging literature on sustainable welfare and socio-ecological risks, this paper has aimed to map national public policies designed to combat energy poverty, relying on a qualitative content analysis of selected sections of the *National Energy and Climate Plans* from all EU member states.

The main finding of this mapping exercise is that most EU countries have provided some policy responses at the national level to cope with the increasing risk of energy poverty, with such policies only missing in Hungary and Slovenia, although the latter pledges to put forward some in the future. This is in itself an interesting result, especially when compared with a similar analysis of the NECPs focused on EU countries' policy responses to other socio-ecological risks, namely those related to industrial decarbonisation and particularly fossil fuel phase-out, which were addressed by only ten member states (Mandelli, 2022b).

It also appears clear that national policies against energy poverty vary considerably from one country to another, as different policy mixes emerge from our analysis of the NECPs. In particular, from an eco-social perspective, the relative emphasis given to social or green energy instruments is very heterogeneous. Focusing on these two types of policy instruments – hence excluding regulatory and soft-law measures, which can be important tools against energy poverty but not

strictly relevant from an eco-social perspective – and only considering adopted policies – hence disregarding general commitments – we can group EU countries into five broad clusters.

The first cluster includes Belgium, Bulgaria, Estonia, Denmark, Germany, Latvia, Romania and Sweden, where social policy instruments are prioritised, while green energy policies are absent or remain generic and not targeted to vulnerable consumers. The opposite is the case for the second cluster, comprising Czechia, Luxembourg, the Netherlands and Poland, where green energy policies are predominant vis-a-vis social policies. The third cluster groups together the largest number of EU countries (Austria, Cyprus, Finland, France, Croatia, Italy, Lithuania, Malta and Slovakia) that have all adopted a comprehensive mix of social and green instruments to tackle energy poverty. The members of the fourth cluster – Ireland, Spain, Greece, and Portugal – also put forward a mix of green and social policy instruments, but, on top of that, they also provided dedicated strategies and, in some cases, also governance structures to promote a coherent integration between their various instruments. In other words, the fourth group differs from the third in its efforts to develop integrated eco-social policy mixes to tackle energy poverty. The fifth cluster consists of Hungary and Slovenia where no energy poverty policies have been adopted. These five clusters are illustrated in the map in Figure 2.

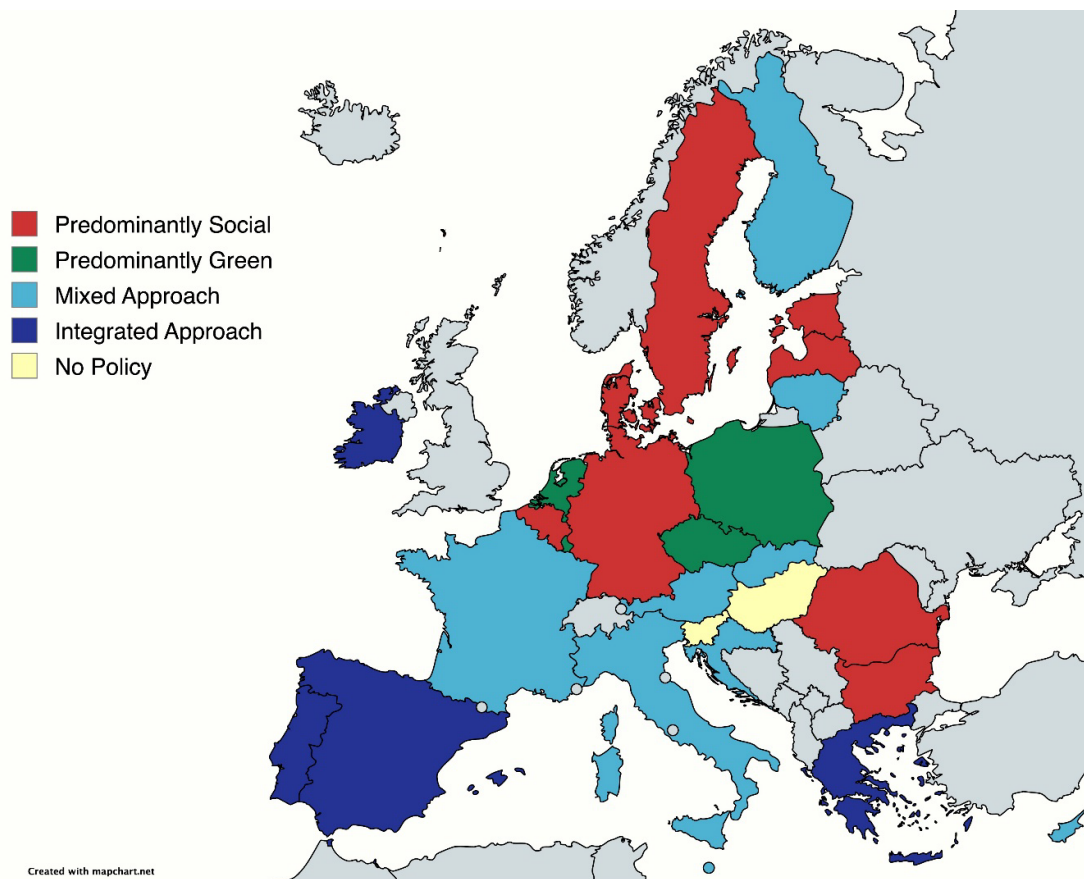


Figure 2: Varieties of energy poverty policies in the EU (source: authors' own elaboration based on the NECPs)

Therefore, our findings indicate that pathways towards eco-social policy integration are emerging across the EU, as many European countries are combining social and green instruments in their responses to energy poverty. Three Southern European countries and Ireland, which belong to the fourth cluster, are even more firmly pursuing an integrated approach using dedicated strategies and sometimes governance structures, which set overarching objectives and coordinate various policy instruments. This raises the question of how to explain this specific cluster gathering four peripheral EU countries. We might hypothesize that the combination of a high problem pressure from national energy poverty rates with the scarce capacity of ordinary policies to effectively cope with such a problem might have pushed Portugal, Spain, Greece, and Ireland to pursue innovative integrated policy changes. However, more empirical research is needed to explain this, as well as the other clusters identified here. Finally, our findings highlight that socio-ecological risks are not necessarily addressed through integrated policies, but rather a ‘silo’ approach – hence a lack of strategies or instruments coordinating instruments across policy sectors – persists in many countries’ energy poverty measures.

All in all, energy poverty emerges as a crucial area for the empirical study of eco-social policies. Interestingly, our clusters do not seem to coincide with countries’ social and environmental performances – which have been measured by studies on ‘worlds of eco-welfare states’ (Zimmermann & Graziano, 2020) – nor with traditional welfare regimes (Esping-Andersen, 1990), or environmental state classifications (Duit, 2016). Furthermore, when comparing Figures 1 and 2, there does not seem to be an obvious correspondence between the relative incidence of energy poverty in a country and the type of policy mixes it adopts. While the diffusion of policy integration in Southern Europe might lead us to conclude that high energy poverty rates can pave the way for the emergence of eco-social policies, the lack of integrated approaches in several Eastern European countries – which are also highly affected by energy poverty – shows that this is not necessarily the case. Institutional legacies and multilevel political dynamics might be more indicated when explaining varying policy approaches across Europe. Thus, more studies are needed to understand these clusters and to unveil the politico-institutional dynamics underlying them.

A crucial factor that might explain the fragmented emergence of integrated eco-social policy pathways in the field of energy poverty relates to the potential *Europeanization* of energy poverty policies. As explained above, the EU has considerably advanced its policy framework in this field over the years, with notable recent developments including the *Social Climate Fund* and a common definition of energy poverty. This, we can hypothesize, might have created supranational pressure on domestic governments to promote reforms in this field towards eco-social integration. Indeed, the NECPs themselves can be seen as a crucial instrument for the EU to coordinate national policies and promote upward convergence and harmonization. Indeed, comparing the updated version of the NECPs with their previous versions submitted in 2019 or 2020 shows that considerable progresses have already been

made in several countries, adding new policies or boosting the coherence of existing policy mixes over the course of just a few years.

In conclusion, we call for more studies to overcome at least a couple of crucial limitations of this paper. First, in-depth country case studies would be crucial not only to obtain more information about the policies mentioned in the NECPs – that often lack crucial details on key issues such as the generosity of the benefits or their financing mechanisms – but also to study their development across time. This would also allow us to understand the politics of energy poverty policies, hence the political dynamics underlying the adoption and implementation of the measures outlined in here, as well as their reform trajectory. Second, this contribution has focused solely on policy outputs, hence assessing the explicit features of the public policies that governments present as key to the fight against energy poverty. The actual outcomes of these policies on the reduction of energy poverty, but also on broader social and ecological targets, has fallen outside the scope of our paper. Therefore, a thorough evaluation of the policies mentioned here would provide stronger insights into the extent to which EU countries are moving towards sustainable welfare.

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Appendix – Country-specific NECPs analysis

1. Austria (AT)³ – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - General welfare schemes are mentioned, including minimum income and housing allowance instruments - <i>Clean Heating for All</i> (since 2022): financial support for boiler replacement up to 100 % for low-income households - <i>Climate-fitted buildings for vulnerable people</i> (since 2022) to improve the thermal efficiency of old buildings owned by non-profit organizations and municipalities and hosting low-income people - <i>Household Energy Saving Programme</i> (since 2022) providing advice on energy consumption in low-income households - <i>WOHNSCHIRM</i> (since 2022) has been supporting tenants who have rent arrears. Initially it was related to COVID-19 crisis, but then it was extended until the end of 2026. The total financial envelope is €244 million. - <i>Climate Action Initiative</i> providing awareness-raising and training on energy saving, buildings and mobility. - The scope of the <i>Energy Efficiency Act</i> has been expanded to include measures for energy suppliers to target energy poor households
Governance	-
Additional dimensions of analysis	
Issue recognition	There is a definition of energy poverty (“A household is considered energy poor if its income is below the at-risk-of-poverty threshold and, at the same time, it has to cover above-average energy costs”) and an indicator (more than 140% average household energy consumption)
Supranational, subnational & private policies	<p>The role of provinces is mentioned but not detailed.</p> <p>The Social Climate Fund is mentioned among the measures to combat energy poverty at the national level</p>

³ Most of the measures mentioned in the updated NECP have been put forward in 2022, thus they differ significantly from the previous version. The updated NECP recognizes that new measures have been put forward in response of the recommendations by the European Union.

2. Belgium (BE) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	The Federal government sets the ‘just transition’ principles among its priorities. However, it does not mention any connected strategy targeting energy poverty.
Instrument	<ul style="list-style-type: none"> - A federal social tariff for electricity and natural gas has been in place since 2004. The <i>Social Fund for Gas and Electricity</i> (reinforced by €16 million in 2021) to the <i>Social Heat Fund</i> (reinforced with €17 million in 2022) help vulnerable consumers respectively with their gas and electricity bills and with the financial costs of heating using oil and propane. - As the high prices have also led to over profits for some energy companies, a cap was imposed at both European and Belgian level for electricity. - Through a federal reform of the taxation on energy bills, VAT on supplies of natural gas, electricity and heat through district heating networks under residential contracts will be definitively reduced to 6 %. Also, the excise reform includes a commitment to support the energy transition, gradually transferring half of the excise duties on electricity to excise duties on fossil fuels (natural gas and propane).
Governance	An expert group on energy poverty proposed energy poverty indicators to be included in the poverty reduction plan. However, no detail is provided, so it appears unclear what this expert group is.
Additional dimensions	
Issue recognition	The <i>Energy Poverty Platform</i> publishes an annual energy poverty barometer, based on three indicators: i) households in ‘measured energy poverty’ spending too much of their disposable income on energy; ii) households in ‘hidden energy poverty’ with energy costs being abnormally low compared to other households; iii) households in ‘subjective energy poverty.’ Considering these 3 categories, 20.6% of Belgian households faced some form of energy poverty in 2021 (445,000).
Supranational, subnational & private policies	Several measures are taken at the regional level. In the Flemish region, the regional government’s coalition agreement 2019-2024 foresees an ‘additional effort to reduce energy poverty.’ Also in Flanders, there is an Energy Poverty Platform charged with measuring the incidence of energy poverty, and financial incentives for renovation or investments in renewable energy (including in social housing). In Wallonia, regional measures include financial support for building renovations, coaching and personalised information, as well as promotion of energy communities.

3. Bulgaria (BG) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - The <i>Social Assistance Act</i> (2008) provides targeted heating assistance (applicants must state the type of heating used: heat, electricity, solid fuel or natural gas) to most vulnerable people (income less than a differentiated heating income) during the heating season (5 months). The amount of the aid is unspecified and determined before the start of the season. - Several policies are mentioned providing assistance to energy communities and facilitating (on paper) access for energy poor: facilitated access to finance and information, regulatory and capacity building assistance to public authorities; rules to ensure equal and non-discriminatory treatment of consumers. - Commitment to set up a mechanism for the protection of vulnerable electricity customers prior to the start of the process of full liberalisation of the electricity market to meet minimum electricity needs (beyond heating). - Vague commitment to set up long-term measures fostering investments in energy efficiency, renovation of buildings and social housing and the reduction of the energy demand.
Governance	<ul style="list-style-type: none"> - Commitment (following an obligation in the <i>Energy Act</i>) to designate or establish a body to develop the <i>National Social and Climate Plan</i> and to establish and maintain an information system on energy poverty data. - Implementation of energy poverty policies is jointly done by the Ministry of Finance, the Ministry of Social Policy, the Ministry of Regional Development and the Ministry of Energy, with the support of an international financial institution. - Proposal of an <i>Observatory</i> (financed through EU and national funding) bringing together a wide community of practitioners, officials and researchers tasked to coordinate the implementation of policies and measures, to set up a Knowledge Centre for information and analysis, and to provide a forum for stakeholder discussion.
Additional dimensions of analysis	
Issue recognition	National definitions of ‘household in energy poverty’ and ‘vulnerable customer for the supply of electricity’ were introduced in 2023 with an amended Energy Act following EU Directive. The Act lays down an obligation to assess the number of households in energy poverty and vulnerable customers providing dedicated criteria, conditions and procedures.

Supranational, subnational & private policies	EU measures are mentioned as inputs to develop national policies, notably including the Social Climate Fund.
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4. Cyprus (CY) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<p>A 2015 <i>Decree</i> by the Minister for Energy, Commerce and Industry sets out measures to protect vulnerable electricity customers, including:</p> <ul style="list-style-type: none"> - Special household price under <i>Code 08 of the EAC</i>: reduced prices for electricity (20% lower than normal) to vulnerable consumers that submit a dedicated application. - (non-targeted) Financial incentives (depending on the available budget) for installing a photovoltaic system with the metering netting method. - Financial incentives (depending on the available budget) for the energy upgrading of dwellings with a higher rate of sponsorship if compared to other consumers (80% rather than 60%). - Continuity of electricity supply during critical periods to vulnerable consumers experiencing serious health problems. <p>The NECP also commits to introduce new measures to update the 2015 ones.</p>
Governance	-
Additional dimensions of analysis	
Issue recognition	There is a definition of vulnerable customers contained in a dedicated Decree put forward in 2015. A ministerial decision, as part of emergency measures to deal with the energy crisis, extended the categories of vulnerable consumers in 2022. 3 new Decrees are being prepared to redefine the criteria for energy poverty following the EU's <i>Electricity</i> and <i>Energy Efficiency Directives</i> .
Supranational, subnational & private policies	EU measures are mentioned as inputs to develop national policies.

5. Czechia (CZ) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - Although there is a commitment to develop energy poverty policies in the future, such policies are not in place yet. - The NECP refers to general economic support for vulnerable consumers (through social policies) and consumer protection regulations in emergency situations (supplier of last resort, over-licensed obligation). Both measures are not described in great detail. - The <i>New Green Savings Light</i> programme funded through the <i>EU Recovery and Resilience Facility</i> provides public funds to help reducing housing renovation costs and provides advice in this sense. It not exclusively targeted to low-income households.
Governance	-
Additional dimensions of analysis	
Issue recognition	A definition of energy poverty has not yet been included in the Czech legal order, so the NECP refers to the EU definition in the <i>Energy Efficiency Directive</i> . The NECP commits to develop such definition, as well as related indicators and monitoring systems.
Supranational, subnational & private policies	<p>EU measures are mentioned as inputs to develop national policies. The <i>Recovery and Resilience Facility</i> is used to finance the <i>New Green Savings Light</i> programme. The <i>Social Climate Fund</i> is mentioned as an important measure.</p> <p>At the regional level, a pilot programme of financial assistance to households and municipalities in Karlovarské, Moravian-Silesian and Ústí nad Labem regions is mentioned to pre-financing the replacement of non-compliant solid fuel boilers</p>

6. Germany (DE)⁴ – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<p>- Energy poverty is addressed within the broader social law framework which does not focus on individual elements of poverty, such as energy. However, minimal social security schemes cover electricity, heating and hot water expenses. In this respect, the <i>Housing Benefit Act</i> establishes that priority must be given to a housing cost subsidy for low-income people. These are targeted to persons who cannot cover a minimum subsistence level with their own income and assets. The amount of benefits are unspecified.</p> <p>- To the extent that payment obligations for energy costs cannot be met and the energy supply has been blocked or threatens to do so, loans or, in exceptional cases, subsidies may also be considered to prevent disconnection.</p> <p>- Price brakes for gas and electricity were introduced in 2023 to face the energy crisis.</p> <p>- General social policy measures were introduced in 2022 to face the energy crisis (increased minimum wage, childcare benefits, basic tax-free allowance)</p> <p>- Through Energy Advisory Services (<i>Energieberatungen</i>), the Federal Government focuses on providing information, advice and assistance to citizens on energy-related issues. These are provided by dedicated consumer centres. <i>StromsparCheck</i> is a service providing advice on electricity and energy savings specifically to low-income households free of charge.</p>
Governance	-
Additional dimensions	
Issue recognition	Energy poverty is not explicitly defined, nor are official indicators presented in the NECP.
Supranational, subnational & private policies	The Social assistance programs and housing allowance systems are managed at the local level, while consumer centres providing energy advices are private.

⁴ In Germany, many measures mentioned in the updated NECP have been put forward in 2022-2023, thus they differ significantly from the previous version.

7. Denmark (DK)⁵ – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - The role of social policies is mentioned. - Old-age pensioners and early pensioners on old schemes (awarded under the rules prior to 1 January 2003) may, on application, receive a heating allowance, the amount of which depends on individual heating costs. Other social policy schemes are provided at the municipal level (see below). - There are several measures targeting energy efficiency improvements, financially supporting the transition of households to green energy sources including for heat pumps, boilers, building insulations, district heating. - A number of one-off payments were provided in 2022-2023 to face the energy crisis. First, in June 2022 and again in February 2023, a series of tax-free one-off lump-sum payments were provided to pensioners, disabled persons, single parents and, at a later stage, to financially vulnerable families with children. The amount changes depending on the beneficiaries. Second, in August 2022, a one-off subsidy (<i>Varmechecken</i>) was paid to low-entry households (DKK 6,000). Finally, in autumn 2022, a temporary and voluntary scheme was introduced for households and businesses to have part of their energy bill frozen for subsequent payment.
Governance	-
Additional dimensions	
Issue recognition	<ul style="list-style-type: none"> - No definition of energy poverty is provided in the NECP. - The assessment of the number of energy poor households follows 3 criteria provided by the <i>Energy Efficiency Executive Board</i>: low-income households, households in low energy performance dwellings, high energy consumption in the household. Accordingly, the NECP estimates that approximately between 7,000 and 29,000 corresponding to the 0.2-0.9 % of all Danish households are energy poor.

⁵ In Denmark, many measures mentioned in the updated NECP have been put forward in 2022-2023, thus they differ significantly from the previous version.

Supranational, subnational & private policies	<ul style="list-style-type: none"> - Old pensioners and early pensioners can apply for a personal allowance from the municipality. Personal allowances cover reasonable and emergency costs, such as the payment of additional costs for heating or electricity. - Municipalities may, on a case-by-case basis, also provide assistance with reasonably justified individual housing costs under the <i>Active Social Policy Act</i> to a person who has undergone changes in his or her circumstances, such as unemployment or illness.
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8. Estonia (EE)⁶ – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - Under the <i>Social Welfare Act</i>, the state provides maintenance benefits to people in need people. The housing costs to be considered for the calculation of the subsistence allowance include hot water, heating, electricity and gas. - Support for the renovation of small and multi-dwelling buildings to improve the energy efficiency of housing is granted. The amount of support and targeting are not specified. - The state is investing in the development of a municipal housing fund on a case-by-case basis, to improve the availability of rented dwellings for socio-economically disadvantaged households. The amount and targeting of this fund are not specified. - The <i>Consumer Protection Act</i>, the <i>Electricity Market Act</i>, the <i>District Heating Act</i> and the <i>Natural Gas Act</i> provide a series of measures for the protection of energy consumers, including an obligation for energy suppliers to wait 90 days before interrupting heat supply in case of debt. - Some temporary measures were implemented in the winter 2022-2023, partially compensating all customers for electricity, gas and district heating bills. Subsidies are ‘automatic’, with energy providers reducing prices over certain defined thresholds. - Between 2022 and 2026, through the <i>Electricity Market Reform</i>, state-owned company Eesti Energia is obliged to sell electricity to Estonian household consumers, some commercial consumers, local authorities and all electricity distributors as a universal service to mitigate price increases.

⁶ In Estonia, many measures mentioned in the updated NECP have been put forward in 2022-2023, thus they differ significantly from the previous version.

Governance	-
Additional dimensions	
Issue recognition	An energy poor individual is defined as someone who has received at least one subsistence allowance within the <i>Social Welfare Act</i> in the last six months and whose income per family member in the previous month does not exceed the minimum wage. Hence, Estonia monitors energy poverty on the basis of the <i>Social Welfare Act</i> . A total of 16,508 people received maintenance support for housing costs, referring to 1.2 % of the Estonian population in 2021.
Supranational, subnational & private policies	<ul style="list-style-type: none"> - A municipal advisory unit was set up within the <i>Social Insurance Board</i> with the aim of ensuring the provision of social welfare assistance measures. - The foundation Kredex offers the grants to individuals and apartment associations to support building renovations.

9. Greece (EL) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	There is an <i>Action Plan for Combating Energy Poverty</i> in the long run, with targets for reduction of energy poverty set at 50% in 2025 and 75% in 2030 compared to 2016. This Plan includes a definition of households affected by energy poverty through specific quantitative criteria and it mentions all the available schemes to address energy poverty. The Plan also sets up a monitoring and control mechanism through annual progress reports to assess and improve existing policy measures.
Instrument	<ul style="list-style-type: none"> - There are different consumer protection measures: a social tariff scheme mitigating the impact of the energy crisis; an ‘energy card’ for affected households; and a regulatory package to protect affected households. These measures are not described in detail. - There are several energy efficiency and renewables measures: upgrades of residential buildings (target and tools unspecified); promotion of the installation of RES plants (target and tools unspecified); commitment to incentivize energy efficiency for vulnerable groups through the <i>Energy Efficiency Obligation Scheme</i> and the <i>Just Transition Areas</i>; commitment to incentivise Renewable Energy Communities to tackle energy poverty - The NECP commits to develop additional policy measures, including to carry out information and education actions

Governance	There is a commitment to actively involve affected parties, in particular local and regional authorities, in the implementation of measures and in the identification of affected households
Additional dimensions of analysis	
Issue recognition	The Action Plan provides a definition of households affected by energy poverty, as well as a monitoring and control mechanism to assess planned policies. The index used to measure energy poverty combines energy consumption with net income.
Supranational, subnational & private policies	The Recovery Fund's resources and other European funds are mentioned as key to support renovation programmes (for energy savings, for 'Recycling Equipment', for public buildings, for solar water heaters in homes and 'Photovoltaics on the roof')

10. Spain (ES) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	<ul style="list-style-type: none"> - The <i>National Strategy against Energy Poverty</i> (ENPE) was adopted in April 2019, providing a comprehensive framework combining short- with medium- or long-term measures. It provides a definition of energy poverty and vulnerable consumers. It sets targets to reduce energy poverty by at least 25 % by 2025, looking to go further and reach 50 %. The ENPE includes 19 concrete measures, organized around 4 key thematic axes. - To implement the Strategy, the government commits to prepare an <i>Operational Plan</i>, aimed at deploying the actions that remain to be implemented in the two-year period 2023-2024, detailing the steps needed to achieve the commitments.
Instrument	<ul style="list-style-type: none"> - The so-called <i>Minimum Vital Supply</i> was created in September 2012 to mitigate the impact of the escalation of natural gas prices. It is described as a social protection instrument, establishing a minimum threshold of energy supply which might not be interrupted for six months. - A social voucher was established in March 2013 and further reformed in 2022 (in the framework of the National Plan to respond to the economic and social consequences of the war in Ukraine) facilitating access to electricity discounts.

	<ul style="list-style-type: none"> - The <i>Operational Plan</i> commits to create a new energy social bond, to provide automatic financial aid for all energy sources to vulnerable consumers. - Measures to improve energy efficiency and residential equipment, as well as to encourage self-consumption facilities and energy communities are mentioned as tools to alleviate energy poverty. - There is a commitment to develop awareness and consumers' information about energy poverty.
Governance	The implementation of the <i>National Strategy against Energy Poverty</i> occurs in a coordinated way, involving General State Administrations (Ministries of Ecological Transition; Economy; and Social Security; Institute for Diversification and Energy Saving (IDAE); National Institute of Social Security), autonomous communities and local authorities, sectoral associations.
Additional dimensions	
Issue recognition	<ul style="list-style-type: none"> - The ENPE includes a definition of energy poverty and vulnerable consumers. The indicators to measure energy poverty are derived from the European Energy Poverty Observatory and include: 1) disproportionate expenditure; 2) hidden energy poverty; 3) inability to maintain the dwelling at an adequate temperature; 4) late payment of invoices. - These are complemented by other indicators regarding climatic zones and individual characteristics. The IDAE, a public business entity attached to the Ministry for the Ecological Transition, is responsible for monitoring energy poverty
Supranational, subnational & private policies	European Funds, and especially the Recovery and Resilience Facility, are mentioned as key tools

11. Finland (FI)⁷ – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - Energy poverty is explicitly treated as part of social policy, where the <i>Act on Social Assistance</i> (1412/1997) lays down the grounds for general social assistance. As part of this, low-income households may receive housing allowances (either as general housing allowance or as housing allowance for pensioners) to cope with utility bills. - Various temporary measures were introduced during the 2022-2023 energy crisis (e.g., fixed four-month income tax credits, VAT reductions on electricity from 24% to 10%, compensation schemes in the winter months). - There are several subsidies for renovation projects in residential buildings targeting the whole population, but also aiming at generating energy savings among vulnerable people (especially for elderly and disabled) and people living in social housing (e.g. those administered by the Housing Finance and Development Centre of Finland, or <i>ARA</i>). - State subsidies and loans are targeted at the construction of new residential buildings for low-income households (social and affordable housing). In 2022, these subsidies were €277 million.
Governance	-
Additional dimensions	
Issue recognition	Energy poverty is recognized as an issue, although it is stated to be rare in Finland due to the social security system mitigating its effects. Energy poor consumers coincide with generally vulnerable customers, as defined in the Constitution and the 1997 <i>Act on Social Assistance</i> .
Supranational, subnational & private policies	<ul style="list-style-type: none"> - Regional energy advisory services funded by the Energy Authority help to improve energy efficiency among vulnerable households. - The EU Social Climate Fund is mentioned among the energy poverty measures

⁷ In Finland, many measures mentioned in the updated NECP have been put forward in 2022-2023, thus they differ significantly from the previous version.

12. France (FR)⁸ – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<p>- Introduced in 2018, the <i>energy voucher</i> is a state aid allocated to small households to help them with their energy expenditure regardless of the type of heating or renovation work. It is sent automatically to low-income households and, in 2022, it ranged from €48 to €277. An exceptional energy voucher between €100 and €200 was distributed between the end of 2022 and the beginning of 2023 to the lowest 40 % of French households.</p> <p>- The <i>Energy Saving Certificates</i> scheme requires energy suppliers to finance a certain amount of energy renovation works in French energy poor households. Since its creation in 2016 to 2022, around €6.7 billion of works were financed for energy poor consumers. Within the framework of this scheme, several funding programmes have been put forward.</p> <p>- <i>MaPrimeRénov</i> is a private grant scheme to finance energy renovation works, such as insulation, change of heating system, installation of ventilation, energy audit, or even overall renovation. Although it is targeted to the whole population, in 2022, almost 70 % of the projects financed by <i>MaPrimeRénov</i> concerned low-income households.</p> <p>- In the context of the energy crisis, tariff shields have been put in place to protect households from unprecedented increases in the prices of gas, electricity and fuels, with state aid reducing the price of market offers.</p> <p>- During the winter truce, between 1 November and 31 March, energy suppliers are under an obligation to maintain the supply of natural gas and electricity to their customers in arrears. Beyond this period, disconnection is highly regulated, for instance by granting a minimum of 60-day electricity supply prior to any cuts for vulnerable consumers.</p>
Governance	The <i>National Observatory for Energy Poverty</i> is responsible for monitoring energy poverty and related policies in France.
Additional dimensions	

⁸ In France, many measures mentioned in the updated NECP have been put forward in 2022-2023, thus they differ significantly from the previous version.

Issue recognition	Energy poverty was defined by the Law of 12 July 2010 establishing a national commitment for the environment, as ‘a person who has particular difficulties in obtaining the energy supply necessary to meet his basic needs as a result of the inadequacy of his or her resources or habitat conditions’. Two Indicators are used to monitor energy poverty: i) the energy effort rate; ii) the subjective feeling of coldness.
Supranational, subnational & private policies	<ul style="list-style-type: none"> - The NECP mentions that France is preparing its Social Climate Plan, as requested by the EU, in line with the updated National Energy Climate Plan. - As for private policies, energy suppliers are involved in financing energy renovations and energy-saving operations.

13. Croatia (HR) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	The NECP commits to develop by the end of 2024 a <i>Program for Elimination of Energy Poverty</i> . This Programme will feature the following elements: a definition of energy poverty; evaluation of the scope and socio-economic characteristics of energy poor households; establishing the objectives of measures to combat energy poverty; establishing indicators for monitoring the success of the implementation of the Program; providing energy consulting for all energy-poor citizens; establishing a system of measuring and monitoring energy poverty indicators; establishing a system of increasing energy efficiency at the level of energy-poor households. Funding sources and priorities will have to be specified, but the NECP gives special emphasis to the objective of renewable building renovations.
Instrument	<ul style="list-style-type: none"> - There is an energy poverty curb programme in the <i>National Energy Efficiency Action Plan 2022-2024</i> involving the renovation through the use of renewable energy sources of 387 multi-apartments residential buildings in assisted areas and areas of special state concern for the period up to 2025. - A compensation of the costs encountered by vulnerable customers due to the supplement charged by suppliers on top of the price of electricity is available. This is provided through vouchers. The monthly amount was initially increased from HRK 200.00 to 400.00 and then changed into 70.00 in 2023.
Governance	The NECP commits to organise of open partner dialogues on energy poverty, raising awareness and building capacity on energy poverty through local info centres involving energy poor citizens

Additional dimensions of analysis	
Issue recognition	Energy poverty is defined by income census (i.e. households with low-income levels). The <i>Program for Elimination of Energy Poverty</i> shall improve this definition, while also measuring and monitoring energy poverty indicators.
Supranational, subnational & private policies	EU funds are mentioned as an avenue to implement the <i>Program for Elimination of Energy Poverty</i>

14. Hungary (HU)⁹ – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<p>- The NECP generally aims to reduce the number of vulnerable consumers (for example through energy efficiency improvement), but it gives no details on the dedicated programmes.</p> <p>- Measures to enable an active role of consumers on the market, such as smart meters capable to manage time-based tariffs, and energy efficiency programmes are vaguely mentioned, but these are not targeted to vulnerable consumers.</p>
Governance	-
Additional dimensions of analysis	
Issue recognition	The NECP generically defines energy poverty a difficulty in securing basic energy needs. There is no unanimous definition of vulnerable energy consumers, but different ones depending on different policy measures.
Supranational, subnational & private policies	-

⁹ There is a significant drop in the number of references to energy poverty if compared to the previous version of the NECP.

15. Ireland (IE)¹⁰ – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	The <i>Energy Poverty Action Plan</i> (adopted in December 2022) is described as a whole-of-Government strategy that aims to help people at risk of energy poverty, by employing different combinations of available measures implemented during winter 2022/23, as well as longer-term actions. The Plan is in line with the overarching just transition principles that Ireland commits to pursue and it sets out actions in four areas: i) Meeting the Cost of Energy; ii) Energy Efficiency; iii) Research; iv) Governance and Communications.
Instrument	<ul style="list-style-type: none"> - <i>Electricity Costs Emergency Benefit Schemes III</i> provided a total of €2.9 billion in 2022 and 2023, delivering three electricity credits to every household worth €137.64 each in the billing cycles. These schemes are in part funded through the returns from a windfall gains tax (the <i>Temporary Solidarity Contribution</i>) for an amount of €167 million. - Targeted social protection through €1.2 billion of lump sum payments in 2022 and 2023 helped with cost-of-living crisis. - <i>Household Benefits Package</i> provides monthly income support to assist eligible households with their electricity and gas bills. - <i>Fuel Allowance</i> provides weekly income support during the winter months to assist households eligible for social protection payments with their energy costs. - Consumer protection obligations are imposed to suppliers through the <i>Energy Supplier Handbook</i>, which include the right against disconnection during winter for priority vulnerable customers, increased debt repayment periods, reduced debt burden, increased emergency credit, better value for customers on financial hardship meters and promotion of the Vulnerable Customer Register. - Several housing upgrade energy efficiency measures, most of which are targeted to vulnerable consumers, are mentioned: <i>Better Energy Warmer Homes Scheme</i>, providing free energy efficiency home upgrades for lower income households; <i>One Stop Shop Service</i> and <i>Community</i>

¹⁰ In Ireland, many measures mentioned in the updated NECP have been put forward in 2022-2023, thus they differ significantly from the previous version.

	<p><i>Energy Grant Scheme</i> making grants available for lower income households; <i>Energy Efficiency Obligation Scheme</i> obliging to dedicate 5% of energy efficiency measures to energy poor home; <i>Housing Assistance for Older People</i> for elderly people; <i>Housing Adaptation Grant</i> which can support insulation and heating upgrades; finally the <i>Solar PV for the Medically Vulnerable</i>, a €20m scheme targeted to over 3,000 vulnerable customers registered as being dependent on electrically powered assistive devices.</p> <ul style="list-style-type: none"> - The <i>Reduce Your Use Campaign</i> is meant to provide advice to Irish consumers and business. - Measures to address windfall gains in the energy sector are mentioned, such as a cap on market revenues of some generators (such as wind, solar and hydropower) in the electricity sector (which will apply for the period December 2022 to June 2023). - The NECP commits to develop new measures in the framework of Budget 2024.
Governance	<p>A cross-departmental and inter-agency Steering Group was established to develop, implement, and oversee the policies and measures detailed in the <i>Energy Poverty Action Plan</i>. The Group is chaired by the government Department for the Environment, but also involves various other Departments, like Social Protection, Health, Housing and Public Expenditure, as well as other administrative bodies. One of the key objectives of the Steering Group is to facilitate engagement with stakeholders to ensure their voices are heard as part of the annual report process. To this end, the <i>Energy Poverty Stakeholder forum</i> was held on 7th July 2023 in Dublin.</p>
Additional dimensions	
Issue recognition	<p>Energy poverty is measured as a household spending more than 10% of its income on energy. The national Economic and Social Research Institute, responsible to measure this indicator, estimates that around 29% of households in Ireland are in energy poverty, but it also commits to improve the existing methodology.</p>
Supranational, subnational & private policies	<ul style="list-style-type: none"> - European Funds, like the Just Transition Fund, are mentioned. - <i>Local Authority Housing Upgrade programme</i> is mentioned to upgrade the social housing stock.

16. Italy (IT) – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	<i>Legislative Decree No 210/2021</i> provides for the drawing up, on the basis of the work of the <i>National Energy Poverty Observatory</i> , of a national strategy to combat energy poverty including periodic targets and planned actions, which for now remains a commitment.
Instrument	<ul style="list-style-type: none"> - Two means-tested social bonuses are available and provided as a discount on electricity and gas bills, with an amount differentiated according to the number of members of the household and, for gas only, depending on the type of use and the climate zone. The electricity bonus covers around 30 % of the annual expenditure of an average household; the gas bonus accounts for 15 % of annual expenditure. Social bonuses have undergone a profound transformation since 2021, they has been increased and the scope of beneficiaries has been extended. - The <i>Ecobonus</i> provides tax deductions for the energy retrofitting of buildings. this instrument was first extended to households in energy poverty by means of the power to transfer credit for those who were incaptives (<i>Budget Law 2017</i>), and subsequently extended to independent institutions for social housing/social housing (<i>Budget Law 2018</i>). - The <i>National Energy Efficiency Fund</i> provides for subsidised or guaranteed financing by the State for energy efficiency measures carried out by companies and public authorities, including in public housing - The <i>Termico Account</i> incentivises measures for energy efficiency and the production of energy from renewable sources. Under this scheme, between 2021 and 2022, more than 3.700 social housing interventions were carried out for a total of €9.2 million. - Renewable energy communities are mentioned as tools to combat energy poverty. - An all-inclusive ‘basic tariff’ on the energy fed into the grid and a bonus for self-consumption was created in 2017 to the benefit of residents of small islands, partially reimbursing the costs incurred and differentiated for the various types of installations.
Governance	- The National Energy Poverty Observatory was established in Italy by the Decree of the Ministry of Ecological Transition of 29 March 2022. It includes two members appointed by the Minister for the Environment and Energy Security, one by the Minister for Labour and Social Policy, one by the Minister for Infrastructure and Transport, one by the Conference

	<p>of the State Regions and Autonomous Provinces and one by the Regulatory Authority for Energy Networks and Environment.</p> <p>- The Observatory is an interinstitutional platform for designing and monitoring the effectiveness of measures to combat energy poverty and to overcome the fragmented nature of these measures.</p>
Additional dimensions	
Issue recognition	There is no official definition (not indicator) of energy poverty, which the NECP commits to put forward in the national decree transposing the new <i>EU Energy Efficiency Directive</i> , taking into account the activities of the National <i>Energy Poverty Observatory</i> .
Supranational, subnational & private policies	The NECP mentions several measures taken by local authorities (municipalities, regions) in the context of the implementation of national policies.

17. Lithuania (LT) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	The <i>National Progress Programme for 2021-2030</i> sets the target to ‘Reduce energy poverty in the population’ and identifies specific targets to reduce the share of households unable to keep their home adequately warm and spending a significant share of their income on energy for 2025 and 2030. The NECP also seeks policy coherence and promotes a cross-sectoral approach.
Instrument	<ul style="list-style-type: none"> - From 1995, there has been a compensation scheme for heating costs of the dwelling of disadvantaged households, providing reimbursement of a share of heating which exceeds 10% of the difference between the person’s/family’s income and the State-supported income per person/family. - Since 2009, credit has been granted for the renovation (upgrading) of a multi-apartment building, covering the loan and interest of persons entitled to reimbursement of heating costs of the dwelling. - Deprived persons, beneficiaries of cash social assistance, are financially incentivized to purchase solar power plants and/or to replace heat installations using fossil fuels - There are several energy efficiency measures which are targeted to the general population, but should also benefit the energy poor, including the

	<p>renovation of buildings, the conversion of boilers and the modernisation of indoor heating and hot water systems.</p> <ul style="list-style-type: none"> - In the areas of consumer awareness, the <i>VERT calculator</i> helps consumers compare offers from different suppliers. - The NECP commits to provide information for hard-to-reach consumers (not using IT tools) on compensation and energy savings through social workers. - The NECP commits to create an information hub containing information on energy savings, compensations and energy communities.
Governance	-
Additional dimensions	
Issue recognition	<ul style="list-style-type: none"> - No official legal definition of energy poverty is mentioned. It is measured as the share of persons living in households who cannot afford sufficient heating due to lack of money and that spend a significant share of their income on energy expenditure. - In 2018, more than a quarter (27.9 %), the second highest among the EU countries, could not afford heating. The <i>National Progress Programme for 2021-2030</i> sets targets to reduce the current figures by 2025 and 2030. The Ministry of Social Security and Labour is responsible for providing data on energy poverty.
Supranational, subnational & private policies	-

18. Luxembourg (LU) – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - The <i>Law on Individual Housing Aid</i> of 7 August 2023 provides for individual housing grants linked to income conditions to avoid energy poverty. These grants include a premium (up to 100%) for energy renovation under the <i>Klimabonus</i> scheme which counterbalances rising carbon prices and the <i>Climate Loan scheme</i>, a state guarantee also providing aid for the energy renovation of a dwelling.

	<ul style="list-style-type: none"> - Also part of the <i>Law on Individual Housing Aid</i> is the <i>Stone Aid scheme</i> which offers financial contributions to social promoters to encourage the creation of affordable housing. - The <i>Assistance to households in energy poverty</i> programme is targeted to low-income and energy-poor households, who are selected, contacted and made aware of the possible benefits they are entitled to. - <i>Klima-Agence</i> offers a multitude of services to raise awareness and inform different stakeholders on buildings. - Several cross-cutting measures to improve energy efficiency targeted to the general population are mentioned among energy poverty policies (e.g. the <i>Climate Loan Scheme</i>, the <i>Long-term Building Renovation Strategy</i>, the <i>Klimabonus</i>; minimum energy performance requirements for rented dwellings). - Current social assistance legislation stipulates that any person who fulfils the conditions for eligibility for social assistance is entitled to a minimum supply of domestic energy under specified conditions, if they are unable to cover the cost of their domestic energy. However, this entitlement does not translate into a specific financial benefit beyond general social assistance.
Governance	-
Additional dimensions	
Issue recognition	A national indicator for quantifying and monitoring the evolution of energy poverty exists: the <i>combined TEE & BRDE indicator</i> , which measures high expenditure and acceptable energy effort. In 2022, 3.3 % of households in Luxembourg were in energy poverty according to both indicators.
Supranational, subnational & private policies	-

19. Latvia (LV)¹¹ – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - In December 2023, a new instrument was introduced providing automatic targeted support for low and middle-income households in situations of extreme energy price increases. The amount of support paid to households during the 2023 heating season has been estimated at 123-153 million. - The role of social policies in combating energy poverty is mentioned, but not detailed. - A reduced VAT rate to the supply of wood fuels and heat is in place until it will be no longer necessary - The NECP commits to provide support to citizens at risk of energy poverty as part of energy efficiency operations in multi-apartment building. No details on the implementation of this measure are provided. - It also commits to establish a targeted support system to reduce energy costs for households in energy poverty. No details on the implementation of this measure are provided.
Governance	-
Additional dimensions	
Issue recognition	EU indicators are mentioned
Supranational, subnational & private policies	-

¹¹ In Latvia, the measures mentioned in the updated NECP have been put forward in 2022-2023, thus they differ significantly from the previous version.

20. Malta (MT) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - The <i>Energy Benefit scheme</i>, administered by the Department of Social Security provides vulnerable households a direct reduction in their utility bills. The amount of this discount is not mentioned. - Through the <i>Eco-reduction scheme</i> households that consume either: (i) less than 2,000 electricity units per year in a single household; or (ii) less than 1,750 electricity units per person in a two or more-person household, receive a direct rebate on 15-25% of their electricity bills. The NECP explicitly present it as a policy to lower consumption and bills. - Free professional advice by the Energy and Water Agency is provided to vulnerable and low-income households on energy efficient appliances, water efficiency and behavioural change. - Financial schemes are available to reduce energy and water consumption in low income/vulnerable households through the replacement of old and inefficient appliances (administered by the Energy and Water Agency and the Foundation for Social Welfare Services) are mentioned. No further detail is provided on the generosity of these schemes.
Governance	The NECP generically commits to engage stakeholders in the preparation of the Social Climate Plan
Additional dimensions of analysis	
Issue recognition	The NECP promises to develop a new indicator, reflecting Malta's specificity, in 2024 after internal discussions and analysis.
Supranational, subnational & private policies	EU measures are mentioned as inputs to develop national policies. The Social Climate Fund is also mentioned

21. Netherlands (NL)¹² – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - In 2023, the Netherlands boosted the <i>Climate Fund</i> which is given to municipalities for structural insulation measures in owner-occupied dwellings for a total of more than €230 million. The targeting of this Fund is not specified. - Since winter 2022, households have been better protected against energy disconnection if they cannot fully pay their energy bills. - In 2023, a temporary price cap for retail consumers for gas, electricity and heat was occasionally introduced, as the energy market was in an uncertain situation with high prices and high volatility. - So-called <i>Energy Fixers and Fixation Teams</i>, that is volunteers and professionals providing energy advice to residents, are encouraged by the government, which allocated €200 million in 2023 to support access to energy fixers for vulnerable households. - There is a commitment to develop additional policies on housing, care and energy in order to increase the availability of social housing and protect low-income households from high energy spending.
Governance	The Organisation for Applied Scientific Research (TNO) has been investigating energy poverty in the Netherlands since 2018, in cooperation with the Ministry of Economic Affairs and Climate Policy (EZK), the Ministry of the Interior and Kingdom Relations (BZK) and the Ministry of Social Affairs and Employment (SZW). However, its work is not exclusively concentrated on energy poverty
Additional dimensions	
Issue recognition	TNO uses a lack of access to affordable modern forms of home energy as a definition of energy poverty. It also measures energy poverty based on 4 indicators: i) HEQ, high energy expenditure; ii) LIHE, low income combined with high energy bills; iii) LILEK, low income combined with low energy quality dwellings; iv) LEKWI, low income combined with low energy quality housing. The Netherlands has not set a national target with regard to energy poverty.

¹² In the Netherlands, many measures mentioned in the updated NECP have been put forward in 2022-2023, thus they differ significantly from the previous version.

Supranational, subnational & private policies	<ul style="list-style-type: none"> - The NECP acknowledges that the Government is working with local and regional authorities to tackle energy poverty, e.g. through the 3-year National Energy Poverty Research Programme, introduced in 2022. - The EU Social Climate Fund is mentioned as a tool to combat energy poverty.
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22. Poland (PL)¹³ – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - The NECP commits to take actions relating to the modification or introduction of new forms of support, in the field of social policy, energy efficiency in buildings and in the field of education measures aimed at supporting the most deprived customers and reducing energy poverty, however such actions are not specified. - There are several publicly funded programmes (including the EU) aimed at co-financing energy efficiency modernisation measures in households, but not targeted specifically to energy poor. One exception is the financial programme <i>Stop Smog</i> which implements low-carbon projects (thermomodernisation, replacement of heat sources) for the least affluent households in single-family dwellings. - The old NECP mentioned also a buffer mechanism for energy poor households introduced by <i>Energy Law</i> in 2013, that was a flat-rate energy allowance, the amount of which was specified each year by the minister responsible for energy. However, this is notably not found in the updated NECP.
Governance	-
Additional dimensions of analysis	
Issue recognition	Energy poverty is recognised and directly connected to just transition, as the NECP recognises that both charges to fossil fuels and the operation of renewables increase the cost of energy. The NECP commits to monitor the number of households in energy poverty but does not specify how.
Supranational, subnational & private policies	EU measures and funds are mentioned as inputs to develop national policies.

¹³ The previous version of the NECP contained much more details on energy poverty policies. Moreover, the energy allowance is not mentioned in the new version of the NECP.

23. Portugal (PT) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	The <i>National Long-Term Strategy for Combating Energy Poverty 2022-2050</i> was announced in the NECP and published in late 2023. The Strategy has the following objectives: obtaining a diagnosis and characterisation of the problem, developing monitoring indicators, monitoring strategies, setting medium and long-term energy poverty reduction targets at national, regional and local level and proposing specific measures to achieve these objectives, as well as forms of financing. The Strategy should also contribute to the parallel <i>Just Transition Strategy</i> that the government has committed to develop.
Instrument	<ul style="list-style-type: none"> - The <i>Valle Efficiency</i> programme (currently under review) is aimed at economically vulnerable households (beneficiaries of the social electricity tariff) and aims at improving the thermal comfort of housing through the replacement or purchase of energy-efficient equipment. The amount of benefit is not specified - The <i>Long-Term Strategy for the Renovation of Buildings</i> provides for policies such as funding and tax benefits for those who rehabilitate and increase comfort - The <i>Social Energy Tariff</i>, introduced in 2010 and extended in 2014, aims to reduce the energy burden of household consumers. It is automatically granted to customers who meet the criteria of economic and/or social vulnerability. The amount of discount provided is determined yearly by the government - The role of energy communities in the alleviation of energy poverty is vaguely mentioned and so are incentives for changes in consumption patterns and awareness-raising measures.
Governance	<ul style="list-style-type: none"> - The NECP commits to establish a <i>National Energy Poverty Observatory</i> in 2024 foreseen in the framework of the revision of the update of the NRRP and the <i>National Long-Term Strategy for Combating Energy Poverty</i>. The Observatory should provide a public digital platform for data collection and processing, based on an annual survey tool monitoring energy poverty in Portugal. It will also contribute to the identification and conduct of effective public policies. - The <i>National Long-Term Strategy for Combating Energy Poverty</i> has been developed together with representatives of central and local government bodies, consumer associations, representatives of the energy sector and academia.

Additional dimensions of analysis	
Issue recognition	Energy poverty is recognised and directly connected to the strategic objective of achieving a “fair, democratic and cohesive transition”. The NECP sets up national indicators to measure energy poverty. There are no specified targets under the NECP.
Supranational, subnational & private policies	The role of municipalities in the implementation of energy poverty measures is mentioned

24. Romania (RO) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	There is a vague commitment to prepare a national action plan for energy poverty cases, which would define the consumers who cannot be disconnected in critical situations and specifies the recovery of related costs by operators
Instrument	<ul style="list-style-type: none"> - A <i>Law on establishing social protection measures for vulnerable energy consumers</i> (defined on the basis of their income) was approved in 2021, granting aids intended to ensure the needs of minimal energy, including aid for heating the home, aid for energy consumption aid for purchase of energy-efficient equipment or services. The level of assistance depends on income and heating system and it is estimated that 500,000 households will receive up to RON 500 (€100) per month to pay bills during the cold season. - The 2021 Law also included non-financial measures, like the prohibition of disconnection from energy sources and the provision of information. Finally, it foresees a minimum consumption limit. - 2 <i>Emergency Ordinances</i> were put forward in 2022¹⁴ providing 1-year temporary measures to cope with increasing electricity and natural gas prices. The Ordinances entail a cap on electricity prices, consumption ceilings, monetary compensations and temporary solidarity contribution on the surplus profits generated by energy companies. - There is a commitment to provide the possibility of payment rescheduling.

¹⁴ The previous version of the NECP mentions that there have been other similar Emergency Ordinances in the past to define and assist vulnerable energy consumers.

	<ul style="list-style-type: none"> - There is a commitment to grant aids and subsidies for heating to the whole population. - The role of general social benefits and minimum income schemes is mentioned.
Governance	The Ministry of the Economy, Energy and the Business Environment should collaborate with the Ministry of Labour and Social Protection for the development of the action plan.
Additional dimensions of analysis	
Issue recognition	The NECP commits to update the definition of vulnerable consumers originally provided by a 2020 <i>Emergency Ordinances</i>
Supranational, subnational & private policies	An information system to be used by the local public administration authorities in the process of granting benefits to the eligible categories is mentioned

25. Sweden (SE)¹⁵ – final updated NECP

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - The 2001 <i>Social Services Act</i> states that vulnerable consumers are entitled to receive financial assistance to meet their ‘reasonable housing costs’ (which include electricity and natural gas costs), among other consumption costs. The amount of such assistance is not specified. - There are various measures to boost consumers’ awareness. Both the <i>Electricity Act</i> and the <i>Natural Gas Act</i> contain provisions that protect consumers who risk being disconnected from the electricity or natural gas network, such as help them in accessing social policy benefits. The Energy Market Inspectorate allows consumers to compare prices and conditions on the most common contracts of all suppliers. - Different types of support have been provided to households – whether living in poverty or not – to mitigate the increase in energy prices in 2021 and 2022, notably including temporary aids for electricity and gas bills (unspecified amount) and an information campaign

¹⁵ In Sweden, references to energy poverty and related policies grew significantly in the updated NECP if compared to the previous version, where energy poverty was subsumed into general poverty.

Governance	-
Additional dimensions	
Issue recognition	There are no specific targets or definition of energy poverty, which is now addressed within the broader framework of social policy. However, since 2016, there has been a definition of vulnerable consumer (persons who are permanently unable to pay for the electricity or natural gas transmitted or supplied to them for non-business purposes). The Swedish Energy Agency has been mandated by the government to produce evidence in this field in order to implement the <i>EU Energy Efficiency Directive</i> .
Supranational, subnational & private policies	- EU measures and funds are mentioned as inputs to develop national policies. - Municipal social services are deemed responsible for providing financial assistance

26. Slovenia (SI) – draft updated NECP

The 3 components of the energy poverty policy mix	
Strategy	<p>- The NECP commits to set up an <i>Energy Poverty Alleviation Scheme</i> (or <i>Action Plan</i>) encompassing all measures in this field. The pilot phase will run from 2024 to 2026, with a first update in 2026 and every 3 years thereafter. Foreseen actions include investment incentives for energy efficiency and RES measures for the energy poor, as well as advice, information and awareness-raising for the energy poor.</p> <p>- The NECP mentions a national target to reduce the share of households in energy poverty to between 4.6 % and 3.8 % by 2030. Furthermore, there is also another target to implement between 3,500 and 10,500 investments in energy efficiency and renewable energy use for energy poor households by 2030.</p>
Instrument	No specific instruments are mentioned, but the NECP vaguely commits to put forward targeted measures to tackle energy poverty, including investment incentives for energy efficiency and renewable energies, housing and social policies, and information and awareness-raising programmes.
Governance	In the framework of the foreseen <i>Energy Poverty Action Plan</i> , the NECP commits to establish a <i>Strategic Energy Poverty Council</i> , as well a project office with a local advisory network and an information and awareness-raising network.

Additional dimensions of analysis	
Issue recognition	Although the issue is acknowledged, there is no definition, indicator or monitoring mechanism in place yet. ¹⁶
Supranational, subnational & private policies	The NECP commits to planning and implementing measures to reduce energy poverty at local level.

27. Slovakia (SK) – draft updated NEC

The 3 components of the energy poverty policy mix	
Strategy	-
Instrument	<ul style="list-style-type: none"> - Social policies are presented as key to address energy poverty, notably including a 2013 Act providing housing assistance in material need. The parliament is discussing a reform of this housing allowance to increase its generosity, which is deemed insufficient. - Other relevant social policies mentioned include the National Reform Programme, the National Employment Strategy of the Slovak Republic until 2020, the National framework strategy for promoting social inclusion and combating poverty, and public employment services. - Several Decrees providing price regulation for electricity, thermal and gas are mentioned as potentially useful to contribute to alleviating energy poverty. No further detail on these Decrees is given. - There are several programmes for the promotion (via subsidies or loans) of energy efficiency in domestic buildings. Among these, some are targeted to social housing and households at risk of energy poverty, such as the <i>Home Light Recovery</i> programme set up under the <i>REPowerEU</i> programme. This programme should allow 100 % funding for the comprehensive renovation of single-family houses. At the same time, it should allow low-income households to carry out partial renovations under significantly simplified conditions. The foreseen allocation is EUR 40.8 million. - The NECP features several proposals all targeted to energy poor households and aiming to strengthen the current policy framework. These

¹⁶ The previous NECP featured a commitment to set up such measuring and monitoring systems, but these objectives are not found any more in the updated version.

	include tax advantages, financial support, funds for energy efficiency and renewables, improved information.
Governance	In 2023, a cross-ministerial group composed of relevant central government bodies, including social and family affairs, finance, the economy, and the environment was created to provide proposals on the definition of energy poverty and related measures.
Additional dimensions of analysis	
Issue recognition	Although the issue is recognised, definition, monitoring mechanisms and criteria for assessing the risk of energy poverty are lacking. However, following a draft concept note by the Office for the Regulation of Network Industries, a cross-ministerial working group has drawn up a proposal in this sense taking into account EU inputs too.
Supranational, subnational & private policies	EU measures and funds are mentioned as inputs to develop national policies.



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