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From Protection to Structural Reform: Energy Poverty Policy and the Just Energy Transition in Greece

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From Protection to Structural Reform: Energy Poverty Policy and the Just Energy Transition in Greece

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Abstract:
Energy poverty has evolved from a predominantly affordability-based concern into a multidimensional policy challenge encompassing (i) income, (ii) housing conditions, (iii) energy efficiency, (iv) access to essential energy services, and (v) social vulnerability. This report examines the evolving European Union framework for addressing energy poverty and assesses its implications for Greece. It conceptualizes EU policy through three interconnected pillars: prevention, protection, and structural reform, which encompass social and climate finance, consumer protection schemes, incentives for renovation, energy efficiency standards, and participation in renewable and community energy. Particular attention is given to Greece's emerging national architecture, including the updated Energy Poverty Action Plan and the APOLLON programme, which signals a shift from recurrent energy-bill support toward renewable-based structural interventions. The report identifies remaining gaps concerning protection from energy disconnection, the influence of the Social Climate Fund deployment, and outcome-based monitoring; hence, it proposes an integrated pathway for enabling vulnerable households to sustainably exit energy poverty.

Keywords: *Energy justice; Climate Social Fund; Just Energy Transition; Energy vulnerability; Greece; European Union.*

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Preface

The *energy crisis* has not yet overwhelmed us, but it will if we do not act quickly. It's a problem that we will not be able to solve in the next few years, and it's likely to get progressively worse through the rest of this century. We must not be selfish or timid if we hope to have a decent world for our *children* and *grandchildren*. We simply must balance our demand for energy with our rapidly shrinking resources. By acting now we can *control our future* instead of letting the future control us.

– *Jimmy Carter*, 39th President of the USA[1]

1. Introduction

Energy poverty has evolved from a loosely defined social-policy concern into a distinct, legally defined, and increasingly operationalized field of EU policy. After thorough research and extensive debates on this matter, policymakers and practitioners have established a common understanding that extends beyond low income and high energy bills, but it now encompasses affordability, disposable income, expenditure burdens, housing energy performance, and access to essential services (i.e., heating and cooling). At the same time, the EU framework increasingly combines *prevention*, *protection*, and *structural pathways* out of energy poverty. Energy poverty is therefore increasingly approached not merely as financial hardship, but as a broader question of living conditions, vulnerability, and energy justice.

Energy is deeply embedded in everyday life. It allows people to heat and cool their homes, prepare food, study, work, communicate, and participate in society. Yet for many households, securing these basic energy services remains difficult (Healy & Clinch, 2004; Takada & Charles, 2007). Furthermore, energy poverty represents a major barrier to sustainable energy development, as inequalities in the affordability, accessibility, reliability, and quality of energy services can be intensified by geopolitical tensions, armed conflicts, supply disruptions, and dependence on energy imports, which increase energy insecurity and price volatility and disproportionately expose vulnerable households to economic and social hardship (Faiella & Lavecchia, 2021; González-Eguino, 2015; Halkos & Gkargkavouzi, 2026; Karpinska & Śmiech, 2023). Energy poverty has therefore become an increasingly important socioeconomic and environmental challenge, particularly as households face volatile energy prices, rising living costs, climate pressures, and persistent inequalities (Bouzarovski & Petrova, 2015; Thomson et al., 2017). Far from being simply a problem of unpaid energy bills, energy poverty is a *multidimensional* form of deprivation shaped by the interaction of income, energy prices, housing conditions, energy efficiency, climatic circumstances, and wider social inequalities (Stojilovska et al., 2021, 2022). Its consequences can consequently extend across social, economic, technical, institutional, and environmental dimensions.

Traditionally, the literature has distinguished *fuel poverty*, primarily associated with the affordability of domestic energy in developed economies, from *energy poverty*, which has often referred to insufficient access to modern and clean energy services in developing countries (Awaworyi Churchill et al., 2020; Charlier & Legendre, 2019; Halkos & Aslanidis, 2023a, 2023b; Heindl, 2015). This distinction, however, captures only part of a considerably more complex reality. Income, energy efficiency, and fuel prices remain fundamental drivers, but household characteristics, individual energy needs, housing quality, information constraints,

[1] In his "Address to the Nation on Energy" on April 18, 1977, U.S. President Jimmy Carter described the energy shortage as the greatest challenge facing the country apart from war. Emphasizing the scale of the effort required to address the crisis, he stated that "this difficult effort will be the '*moral equivalent of war*' except that we will be uniting our efforts to build and not to destroy."

and climatic conditions can determine whether people are able to achieve adequate energy services (Siksnelyte-Butkiene et al., 2021; Streimikiene et al., 2021).

This *complexity* has made energy poverty equally challenging to measure, especially due to the challenges on the path towards decarbonization in energy systems and circular economy solutions (Halkos & Aslanidis, 2026b, 2023c). The literature encompasses expenditure-based, multidimensional, and subjective or consensual approaches (Fizaine & Kahouli, 2019; Thomson et al., 2017; Thomson & Snell, 2013), alongside measures such as the Multidimensional Energy Poverty Index (MEPI), Household Energy Poverty Index, and hidden energy poverty (Betto et al., 2020; Meyer et al., 2018; Nussbaumer et al., 2012, 2013). Within Europe, particular attention has been given to households unable to keep their homes adequately warm, experiencing arrears on utility bills, or living with leaking roofs, damp walls, and other inadequate housing conditions (Thomson et al., 2017; Thomson & Snell, 2013).

Behind these indicators, however, are lived experiences of discomfort, insecurity, and exclusion. Energy poverty can affect physical and psychological well-being, restrict social participation, and undermine dignity and quality of life, while differences in values, perceptions, socio-cultural backgrounds, and opportunities for meaningful participation may further shape how energy vulnerability is experienced and addressed across households and social groups (Aslanidis et al., 2026; Halkos & Aslanidis, 2026a). It is therefore closely connected to energy justice and its distributive, recognition, and procedural dimensions (Bouzarovski et al., 2021; Jenkins et al., 2016). Importantly, these burdens are not distributed equally. Children, older people, people with disabilities, and other vulnerable groups may experience particularly severe consequences because their health, care, and everyday activities (e.g., creativity of employees) can make them more dependent on adequate household energy services (Bousinakis & Halkos, 2021; Halkos & Aslanidis, 2023a; Snell et al., 2015). Furthermore, these inequalities are particularly visible across Europe, where substantial geographical disparities remain. Recent evidence identifies a core-periphery divide in utility arrears and North-South differences in thermal comfort and housing conditions (Halkos et al., 2025). Yet geographical inequalities tell only part of the story. Energy poverty is ultimately experienced by people, and its burden may differ considerably according to gender, age, socioeconomic position, and household circumstances.

2. The Multidimensionality of Energy Poverty

As already clarified before, energy poverty should not be understood solely as an inability to afford energy bills or as a lack of physical access to electricity. Rather, it constitutes a multidimensional form of deprivation in which economic, social, technical, institutional, and environmental conditions interact to determine whether households can secure the energy services required for a *decent standard of living* (Bezerra et al., 2022; Bourguignon & Chakravarty, 2003). The distinction between *affordability* and *accessibility* remains important, particularly because fuel poverty has traditionally emphasized affordability in developed economies, whereas energy poverty has frequently been associated with access to modern and clean energy in developing economies. Nevertheless, this distinction is increasingly insufficient, since energy deprivation may simultaneously reflect low income, high energy prices, inefficient buildings, inadequate heating and cooling systems, limited access to clean fuels, climatic conditions, and differences in individual household energy needs (Halkos & Aslanidis, 2023a). For this reason, multidimensional approaches have increasingly been adopted in the literature, particularly following the development of the MEPI, which sought to move beyond single indicators and capture overlapping forms of energy deprivation

(Nussbaumer et al., 2012, 2013). Subsequent studies further developed this perspective in different national and household contexts (Bezerra et al., 2022; Okushima, 2017; Sadath & Acharya, 2017).

The multidimensionality of energy poverty can be organized into five interconnected dimensions: social, technical, economic, institutional, and environmental (Halkos & Aslanidis, 2023a). The economic dimension concerns household income, energy expenditure, energy prices, and the affordability of adequate energy services, while the technical dimension encompasses housing quality, energy efficiency, heating and cooling technologies, and access to appropriate energy infrastructure. Environmental conditions further interact with these factors, since inadequate indoor environmental quality, exposure to extreme temperatures, and phenomena such as the urban heat-island effect may increase energy requirements and deepen household vulnerability. At the same time, institutional factors shape households' capacity to access support, participate in decision-making, and benefit from energy-efficiency, renovation, or renewable-energy programmes. These dimensions should therefore be understood as mutually reinforcing rather than as isolated determinants of deprivation.

The social dimension is particularly important because energy poverty converts material and economic disadvantages into unequal lived experiences. For example, energy deprivation may contribute to social exclusion, deterioration in well-being, psychological distress, and reduced participation in everyday activities. In the literature, there is an important factor that is currently omitted, for example, there are serious adverse consequences for people with disabilities, social withdrawal among older people, and school absenteeism among children. These effects can generate a broader vicious circle in which rising energy prices and affordability problems undermine psychological well-being, reinforce isolation, and ultimately deepen social vulnerability and exclusion (e.g., energy aporophobia) (Halkos & Aslanidis, 2023a, 2023b). From an energy-justice perspective, therefore, the multidimensional nature of energy poverty requires attention not only to how much energy households consume or spend, but also to whether different groups possess the financial resources, housing conditions, technologies, and institutional support necessary to achieve adequate energy services and participate fully in society.

Table 1 further illustrates the multidimensional character of energy poverty by demonstrating how energy deprivation intersects with broader dimensions of poverty and human well-being. Rather than being confined to energy affordability or physical access, energy poverty is connected with (i) housing conditions, (ii) health, (iii) education, (iv) water and sanitation, (v) environmental quality, (vi) social participation, and (vii) institutional support. These dimensions are also strongly interdependent but there is of course a great interconnection among them. For instance, inadequate income may restrict a household's ability to purchase sufficient energy services or invest in energy-efficient improvements, while poor housing conditions can simultaneously increase the amount of energy required to achieve adequate thermal comfort. Similarly, limited access to clean cooking technologies or adequate heating and cooling can translate energy deprivation into adverse health and environmental outcomes, while inadequate energy services may affect educational opportunities and participation in social life.

Table 1. Multidimensional poverty dimensions and their relevance to energy poverty and linkages to sustainable development goals

Broader dimension	Key deprivation /indicator	Energy-poverty relevance	Main pathway
Energy access (SDG7)	Access to electricity	Determines access to basic household energy services	Accessibility
Clean cooking (SDGs 3, 7, 13)	Cooking fuel & technology	Reliance on traditional or polluting fuels increases health and environmental burdens	Accessibility / Health
Housing conditions (SDGs 7, 11, 13)	Housing quality & basic household assets	Poor-quality dwellings increase heating and cooling requirements and vulnerability	Energy efficiency
Living standards (SDGs 1, 7, 10)	Income, consumption & material deprivation	Limited economic resources constrain households' ability to purchase adequate energy services	Affordability
Health (SDGs 3, 7)	Nutrition, mortality & health deprivation	Inadequate heating, cooling and polluting fuels can contribute to adverse health outcomes	Health /Well-being
Education (SDGs 4, 7, 10)	School attendance & educational attainment	Energy deprivation may affect studying conditions and contribute to school absenteeism	Social
Water & sanitation (SDGs 6, 7)	Access to safe water & sanitation	Water provision and sanitation can depend on reliable and affordable energy services	Basic services
Social participation (SDGs 1, 10)	Ability to participate adequately in society	Inadequate energy services can contribute to isolation, stigma and social exclusion	Social inclusion
Environmental conditions (SDGs 3, 11, 13)	Indoor air quality & exposure to climatic pressures	Polluting fuels, extreme temperatures and urban heat can intensify energy vulnerability	Environmental
Institutional conditions (SDGs 10, 16, 17)	Access to assistance, infrastructure & public programmes	Determines whether vulnerable households can obtain protection or improve their energy conditions	Institutional

Source: Authors' elaboration based on (Alkire et al., 2021, 2022; Oxford Poverty and Human Development Initiative, 2018; UNDP and OPHI, 2020, 2022; WBG, 2018, 2020, 2022).

The multidimensional character of energy poverty also demonstrates its close relationship with the Sustainable Development Goals (SDGs). First, while SDG 7 (Affordable and Clean Energy) represents the most direct connection, energy deprivation simultaneously affects poverty reduction (SDG 1), health and well-being (SDG 3), education (SDG 4), water and sanitation (SDG 6), inequality (SDG 10), sustainable cities and communities (SDG 11), and climate action (SDG 13). Furthermore, institutional capacity and access to public support further connect energy-poverty policy with SDGs 16 and 17. Additionally, it should not be omitted that gender equality (SDG 5) should be regarded as a cross-cutting dimension, since women and men may experience energy deprivation differently as a consequence of inequalities in income, care responsibilities, household decision-making, housing conditions and access to energy-related investments.

To conclude, energy poverty can therefore both influence and be influenced by progress across several SDGs, reinforcing the need for an integrated rather than sector-specific policy response. Therefore, the multidimensional poverty frameworks developed by international organizations provide a useful foundation for understanding energy poverty as part of a broader system of overlapping and mutually reinforcing deprivations, rather than as an isolated problem of household energy expenditure (Alkire et al., 2021, 2022; Oxford Poverty and Human Development Initiative, 2018; UNDP and OPHI, 2020, 2022; WBG, 2018, 2020, 2022).

3. The European framework on Energy Poverty

The evolving EU framework reflects a shift from treating energy poverty primarily as a question of financial hardship towards a more comprehensive approach that combines prevention, protection, and structural reforms (Table 2). First, the pillar of *prevention* seeks to reduce households' exposure and vulnerability before energy deprivation occurs, through (i) social support, (ii) targeted investment, and (iii) measures that strengthen household resilience. Second, the pillar of *protection* provides an immediate safety net for households already experiencing, or at risk of, energy poverty. Third, the pillar of *structural reforms* addresses the underlying conditions that reproduce energy poverty over time, particularly (i) inefficient housing, (ii) high energy needs, and (iii) limited access to affordable and renewable energy.

3.1. The Prevention Pillar on Energy Poverty

The *prevention* pillar encompasses measures intended to reduce household vulnerability before it develops into persistent energy poverty. The *Social Climate Fund* (SCF) adds an important financial dimension and is active for the period 2026–2032, it supports measures and investments targeting vulnerable households, micro-enterprises, and transport users affected by the extension of emissions trading to buildings and road transport (EU, 2023c). The SCF links the prevention of energy poverty directly to the principle of a socially fair climate transition. Together with the broader European Pillar of Social Rights, Cohesion Policy and other EU funding instruments, these measures reflect the principle that climate and energy policies should not create new forms of vulnerability while pursuing decarbonization.

Additionally, the *Just Transition Fund* (JTF), provides financial support to territories expected to face serious socioeconomic challenges as a consequence of the transition towards EU climate neutrality (EU, 2021). Although the Regulation is not specifically an energy-poverty instrument, it is relevant to the broader prevention of energy and social vulnerability because it supports economic diversification, employment, social inclusion, clean energy, energy efficiency and the socioeconomic transformation of carbon-intensive regions. Importantly, the JTF operates through *Territorial Just Transition Plans*, allowing support to be targeted towards regions and communities particularly exposed to the distributional consequences of decarbonization. Thus, within an energy-poverty framework, the JTF can therefore be understood as a preventive instrument that addresses some of the employment, income and territorial vulnerabilities that may increase households' exposure to energy poverty during the green transition.

For Greece, these instruments provide a complementary framework for preventing rather than merely alleviating energy poverty. As mentioned above, the Energy Efficiency Directive (EED) prioritizes vulnerable households in energy-efficiency measures, whereas the SCF can mitigate the social impacts of rising energy and transport costs, while the JTF addresses territorial vulnerabilities associated with decarbonization. Together, they support an integrated approach combining energy efficiency, social protection and place-based investment, particularly relevant for Greece given its regional inequalities, inefficient building stock and diverse heating and cooling needs.

Table 2. The three pillars of the EU framework on energy poverty

	Prevention	**Protection**	**Structural Reform**
Objective	Actions that prevent households falling into energy poverty	Safeguard households facing monetary and non-monetary difficulties	Tackle the underlying causes of energy poverty and enable decent, affordable, and sustainable energy services
Legislation & Instruments	• Social Climate Fund (Reg. 2023/955) • Just Transition Mechanism (Reg. 2021/1056) • Cohesion Fund & European Social Fund Plus (ESF+)	• Electricity Directive (EU) 2019/944 on consumer protection and safeguarding on electricity disconnection • EPAH • National Social Protection schemes • Social Climate Fund	• EED • EPBD • RED III • Energy Communities & Citizen Energy (Reg. 2018/2001, RED III) • Digitalization & Smart Energy Solutions
Impacts on Energy Poverty	• Mitigation of the impact of energy prices • Support of low-income and vulnerable households • Funds local and regional measures • Promotion of just and inclusive transition	• Protection of vulnerable consumers from disconnection • Ensures access to essential energy services • Provides support with bills and offers flexible payment solutions • Addresses immediate energy hardship	• Reduces energy demand (efficiency measures) • Improves building quality and comfort • Lowers energy bills over the long term • Empowers citizens and communities • Enables participation in clean energy transition
Actions	• Energy vouchers and targeted subsidies • Local energy advice and support services • Capacity building of social services • Investment in public transport and green mobility	• Bill assistance and emergency funds • Prohibiting disconnection of vulnerable households • Arrears management and debt relief • Tailored support for at-risk groups	• Building renovation and insulation • Heat pump and efficient heating system • Community energy projects • Energy efficiency schemes for low-income households
Expected Outcomes	• Reduced risk of entering energy poverty • Greater household financial resilience • Improved access to preventive support	• Reduced severity and duration of energy hardship • Continuity of essential energy services • Reduced energy debt and arrears	• Improved thermal comfort and housing quality • Reduced structural vulnerability to energy poverty • Greater participation in the energy transition

3.2. The Protection Pillar on Energy Poverty

The *protection* pillar operates when vulnerability has already translated, or risks translating, into an inability to secure essential energy services. Here, the emphasis shifts from reducing future exposure to ensuring that households experiencing financial hardship retain access to electricity and other essential energy services. It is important to mention, that the most important near-term opportunity is the SFC, as Greece's SCF has been submitted and is listed by the European Commission as being in the Commission assessment phase (Government Gazette of Greece, 2026). The design and eventual approval of this national SFC will be critical to whether Greece can combine building renovation, clean heating/cooling, mobility and targeted temporary income support into an integrated anti-energy-poverty strategy.

Additionally, a central legal instrument is *Directive (EU) 2019/944* on common rules for the internal market for electricity, which requires Member States to define and protect vulnerable customers (EU, 2019). Specifically, *Article 28* allows vulnerability to be identified through criteria including income, the proportion of disposable income spent on energy, housing energy efficiency, age and critical dependence on electrical equipment for health reasons, whereas *Article 29* on energy poverty highlights the importance of this phenomenon in the EU. Hence, it is important of the EU Member States to adopt appropriate measures to address energy poverty, including social-security support and energy-efficiency improvements.

It ought to also be mentioned that these protections were substantially strengthened by the Electricity Market Design reform (EU, 2024b). The newly introduced *Article 28a* requires Member States to ensure that vulnerable customers and customers affected by energy poverty are fully protected from electricity disconnections through appropriate measures, including prohibitions on disconnection or equivalent safeguards. The Directive also identifies practical mechanisms such as (i) flexible payment plans, (ii) debt advice, (iii) improved communication between suppliers, and (iv) access to finance (e.g., vouchers and subsidies).

The protective framework has continued to develop. For instance, a *Commission Recommendation* specifically addressed the significance of the protection of vulnerable and energy-poor customers from energy disconnections, including during the phase-out of natural-gas networks (EU, 2026). Although a Commission Recommendation is not binding legislation, it provides guidance for implementing the broader legal obligations and explicitly connects access to essential energy services with the right to a decent standard of living recognized under the European Pillar of Social Rights. Protection therefore functions as the *social safety net* of EU energy policy, where prevention has not been sufficient, households should not lose access to essential energy because of financial hardship.

At the local level, the *Energy Poverty Advisory Hub (EPAH)* has contributed to strengthening municipal capacity to identify and address energy poverty, including through EPAH-supported projects in Greek municipalities and knowledge-sharing activities, such as the 2026 EPAH conference in Athens. These initiatives demonstrate growing local awareness and institutional capacity to translate EU energy-poverty objectives into practical interventions. Greece already has promising experience through municipalities, municipal social services and activities supported by the EPAH, including initiatives in Athens and other local authorities (Ferreira et al., 2026). Nevertheless, their largely project-based character also highlights an important implementation gap: local support remains uneven across Greece and has not yet developed into a comprehensive nationwide network of municipal energy-poverty services. To conclude, policymakers and practitioners should strengthen and scale up similar local

structures, which could therefore provide an important bridge between EU-level protection mechanisms and vulnerable households.

3.3. The Structural Reforms needed for eradicating Energy Poverty

The *structural reforms* pillar goes further through the monitoring of underlying conditions that cause households to remain energy poor. For example, financial assistance can temporarily reduce a bill, but it cannot by itself correct an inefficient dwelling that requires excessive energy to remain warm in winter or cool during increasingly severe summer heat. Hence, structural reforms need policymakers' attention from paying for energy poverty towards removing its underlying causes.

The recast EED, provides a central legal foundation for this approach and in *Article* 8 (3) it is required from Member States to achieve a share of their cumulative end-use energy savings among people affected by energy poverty, vulnerable customers, low-income households and, where applicable, people living in social housing (EU, 2023a). The EED therefore embeds distributional considerations directly within energy-efficiency obligations rather than treating vulnerable households as an ancillary social-policy concern. Furthermore, this preventive dimension is reinforced by *Article 22* on information and awareness raising and *Article 24* on empowering and protecting vulnerable customers of the EED. The EED's objective is not simply to compensate households after energy costs become unaffordable, but to strengthen their capacity to avoid energy deprivation in the first place.

Moreover, the EED is complemented by the recast *Energy Performance of Buildings Directive* (EPBD), which recognizes vulnerable households, including households experiencing energy poverty and households particularly exposed to high energy costs that lack the means to renovate their homes (EU, 2024a). Arguably, national building renovation plans ought to include measurable progress indicators concerning the reduction of energy poverty, while financial incentives for renovation should prioritize (i) vulnerable households, (ii) people affected by energy poverty, and (iii) social housing.

Importantly, the EPBD also incorporates the potential social risks of renovation itself. It is required, therefore, that Member States have to address situations in which vulnerable households could face eviction because of disproportionate rent increases following renovation, while *one-stop shops*[2] are expected to provide dedicated technical and financial assistance to vulnerable and energy-poor households. Thus, improving buildings is framed not merely as a decarbonization measure, but increasingly as a social intervention.

A further pathway is provided through renewable and community energy. In the *Article 22* of the Renewable Energy Directive (RED II), the framework for renewable energy communities was introduced (EU, 2018), and then strengthened by the RED III amendments, overall it specifically requires that participation be accessible to all consumers, including low-income and vulnerable households (EU, 2023b). Such communities may produce, consume, store and share renewable energy, potentially allowing vulnerable consumers to participate more directly in the benefits of the energy transition rather than remaining solely passive recipients of assistance.

[2] One-stop shops are local or regional services where households can obtain multiple forms of energy-related assistance through a single point of contact, rather than having to navigate different (i) authorities, (ii) funding programmes, (iii) installers, and (iv) administrative procedures separately.

Taken together, these measures reveal an important progression within EU policy. It ought to be clarified that the *prevention* pillar seeks to keep vulnerable households from entering energy poverty; the *protection* pillar ensures that those experiencing hardship retain access to essential energy services; and the *structural reforms* pillar seeks to remove the conditions that reproduce energy poverty over the long term. These three dimensions consequently connect in a complex, but necessary way, the social policy, the protection of consumers, energy efficiency, and climate policy within an integrated framework.

3.4. The Greek Framework on Energy Poverty

Greece now possesses a recognizable national energy-poverty architecture. In more detail, the *Article 25* of *Law 4342/2015* provides the statutory basis for a national Energy Poverty Action Plan (Hellenic Republic, 2015); the first plan was approved in 2021 and a substantially updated Action Plan was approved at the end of 2025 by a common Ministerial Decision , the updated plan is described by the *Ministry of Environment and Energy* as Greece's central policy instrument for monitoring, analyzing and tackling energy poverty (Hellenic Republic, 2025). This action plan has five core objectives: (i) updates the national definition, (ii) introduces a new household-identification indicator, (iii) updates reasonable living and energy-needs benchmarks, (iv) provides support measures for vulnerable consumers, and (v) establishes a monitoring mechanism. Its importance lies not merely in the introduction of additional support measures, but in the gradual transition from fragmented interventions toward a more coherent system combining identification, measurement, targeting, intervention, and monitoring.

A second major Greek development is the *APOLLON programme*, legislated through *Law 5106/2024* uses renewable energy and collective self-consumption/energy-community structures to reduce electricity costs, including for vulnerable households (Hellenic Republic, 2024). This represents an important shift from recurring bill compensation toward a potentially more structural, renewable-based affordability mechanism. Rather than relying exclusively on conventional income transfers, electricity subsidies, or emergency bill compensation, the programme seeks to connect social protection with the expansion of renewable energy and energy-community structures. Vulnerable consumers can therefore potentially benefit from lower electricity costs generated through collective renewable-energy schemes rather than depending solely on recurrent public expenditure to offset high market prices.

This represents an important evolution in the Greek policy approach. The reason why is that conventional energy poverty measures primarily mitigate the consequences of high energy costs, whereas the APOLLON programme has the potential to address part of their underlying structural causes. This can be achieved by linking vulnerable households to renewable electricity generation and collective self-consumption, moreover, the programme can potentially reduce their exposure to energy-price volatility while simultaneously contributing to national decarbonization objectives. In this sense, APOLLON creates an explicit connection between energy poverty, energy justice, and the energy transition, thus, it becomes clear that the transition toward renewable energy is not treated only as an environmental or technological objective, but also as a potential mechanism for redistributing some of the economic benefits of decarbonization toward vulnerable groups.

4. Priority issues for Greece

Despite the considerable progress made in recent years, important gaps remain between Greece's evolving energy-poverty framework and the broader direction of EU energy and social policy. A first priority concerns protection against electricity disconnection. While the revised EU framework strengthens safeguards for vulnerable and energy-poor consumers, the Greek system continues to rely substantially on defined seasonal protection periods. Greece should therefore assess whether its legislation, i.e., Electricity Supply Code[3], and supplier and distribution-system procedures fully reflect the strengthened EU requirements. In this way, continuous access to essential energy services will be ensured, as it is particularly important from both a social-protection and energy-justice perspective.

A second challenge is the transition from short-term affordability support to structural solutions. Instruments such as the *Social Residential Tariff* (KOT[4]), payment arrangements, and reconnection mechanisms remain essential for households experiencing immediate financial hardship, but they primarily alleviate the consequences of energy poverty. A more durable response requires targeted renovation of inefficient dwellings, improved heating and cooling, greater energy efficiency, and access to renewable energy. Greece's updated Energy Poverty Action Plan represents an important step in this direction, although its impact will ultimately depend on (i) adequate financing, (ii) effective targeting, and (iii) the capacity to reach households that cannot finance such investments themselves.

Moreover, the SCF could become a central bridge between these protective and structural approaches. As of August 2026, Greece's Social Climate Plan remains under Commission assessment. Its eventual implementation provides an opportunity to combine (i) building renovation, (ii) clean heating and cooling, (iii) sustainable mobility, and (iv) targeted temporary income support. The challenge will be to ensure that these resources complement existing programmes, rather than duplicate them, and are directed toward households experiencing the greatest combinations of income, housing, and energy vulnerability.

At the same time, effective policy depends on local capacity and accessible support. Vulnerable households often require not only funding but also trusted information, technical advice, and assistance in navigating complex renovation and energy programmes. As mentioned before, one-stop shops and municipal social services can fulfil this role, yet current capacity does not appear equally developed across Greece. Therefore, it is important for policymakers and practitioners to strengthen such local and regional structures that would ensure access to assistance.

[3] The Electricity Supply Code defines rules for billing intervals, connection and disconnection procedures, switching suppliers, and consumer rights or complaint handling. In Greece, it operates under national governance overseen by regulatory authorities like *RAAEY* (Regulatory Authority for Energy, Waste, and Water).

[4] *Social Residential Tariff* or KOT (i.e., Koinoniko Oikiako Timologio, in Greek) is Greece's main recurring electricity-bill support mechanism, where eligibility uses income, property and other criteria.

Finally, Greece needs to move from monitoring beneficiaries toward monitoring outcomes. The revised definition of energy poverty, the new Indicator I–II2025[5], and the monitoring mechanism introduced by the updated Action Plan are important advances. Nevertheless, policy success should ultimately be judged by whether households experience lower energy burdens, better thermal comfort in both winter and summer, fewer arrears and disconnections, and a sustained reduction in energy vulnerability.

Taken together, Greece is gradually moving beyond a model centered primarily on electricity affordability toward a more integrated approach. This transition also contributes directly to the accomplishment of SDGs, particularly SDG 1 (No Poverty), SDG 3 (Good Health and Well-being), SDG 7 (Affordable and Clean Energy), SDG 10 (Reduced Inequalities), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action). The central challenge for 2026–2032 is therefore not simply to maintain an energy-poverty framework, but to ensure that its different instruments work together to help vulnerable households achieve a durable exit from energy poverty, while simultaneously advancing energy justice and sustainable development.

[5] Greece uses the I–II Indicator to identify energy-poor households based on two simultaneous conditions: (i) actual annual energy expenditure is below 80% of the estimated cost required to meet minimum energy needs, and (ii) equivalised net household income is below 60% of the national median. The indicator therefore combines energy under-consumption and income poverty, while accounting for energy prices and housing energy performance. It is calculated annually using *ELSTAT's* (Hellenic Statistical Authority) Household Budget Survey data and reflects the criteria established under Directive (EU) 2019/944.

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