ENERGY POVERTY AS A COLD AND UNUTTERED JUSTICE ISSUE: EXAMINING THE “RIGHT TO ENERGY”

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF SOCIAL SCIENCES OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

YAĞMUR GÖKÇE GÜLBAHAR

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF SCIENCE
IN THE DEPARTMENT OF POLITICAL SCIENCE AND PUBLIC ADMINISTRATION

SEPTEMBER 2025

Approval of the thesis:

ENERGY POVERTY AS A COLD AND UNUTTERED JUSTICE ISSUE: EXAMINING THE "RIGHT TO ENERGY"

submitted by **YAĞMUR GÖKÇE GÜLBAHAR** in partial fulfillment of the requirements for the degree of **Master of Science in Political Science and Public Administration, the Graduate School of Social Sciences of Middle East Technical University** by,

Prof. Dr. Sadettin KİRAZCI
Dean
Graduate School of Social Sciences _____

Prof. Dr. Aylin TOPAL
Head of Department
Department of Political Science and Public Administration _____

Prof. Dr. Aylin TOPAL
Supervisor
Department of Political Science and Public Administration _____

Examining Committee Members:

Prof. Dr. Mustafa Kemal BAYIRBAĞ (Head of the Examining Committee)
Middle East Technical University
Department of Political Science and Public Administration _____

Prof. Dr. Aylin TOPAL (Supervisor)
Middle East Technical University
Department of Political Science and Public Administration _____

Assist. Prof. Dr. Sinan ERENSÜ
Boğaziçi University
Department of Sociology _____

I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last Name: Yağmur Gökçe GÜLBAHAR

Signature:

ABSTRACT

ENERGY POVERTY AS A COLD AND UNUTTERED JUSTICE ISSUE: EXAMINING THE "RIGHT TO ENERGY"

GÜLBAHAR, Yağmur Gökçe
Master of Science, The Department of Political Science and Public Administration
Supervisor: Prof. Dr. Aylin TOPAL

September 2025, 136 pages

This thesis examines energy poverty from a critical political economy perspective, seeking to provide a comprehensive understanding of the issue. This perspective is adopted to explore the root causes of energy poverty to investigate why international efforts to alleviate this problem have been remaining inadequate. In this context, the aim is to contribute to efforts to recognize energy as a right. The potential "right to energy" is examined with respect to its theoretical foundations, including the energy justice approach, capabilities theory, and practice theory on energy poverty, as well as its legal and ethical foundations.

To discuss the potential right to energy, the thesis provides an examination of international practices dominated by the United Nations and the European Union to comprehend the existing norms related to energy poverty and the right to energy within the framework of human rights law. To establish a basis for this potential right, complementary rights are addressed within the framework of the principle of "permeability of rights", with an aim to examine the connections between the right to

energy and other related rights, and whether the right to energy provides a theoretical basis.

In light of these discussions, it is suggested that this right could provide a basis for addressing energy poverty. Furthermore, it is argued that the rights-based approach emphasizes justice and affordability as priorities, rather than focusing on profit-oriented efforts and efficiency. This approach also underlines the role of the state among the actors involved in efforts to alleviate energy poverty.

Keywords: energy poverty, energy justice, right to energy, human rights

ÖZ

SOĞUK VE UNUTULMUŞ BİR ADALET SORUNU OLARAK ENERJİ YOKSULLUĞU: "ENERJİ HAKKI" ÜZERİNE BİR İNCELENME

GÜLBAHAR, Yağmur Gökçe
Yüksek Lisans, Siyaset Bilimi ve Kamu Yönetimi
Tez Yöneticisi: Prof. Dr. Aylin TOPAL

Eylül 2025, 136 sayfa

Bu tez, enerji yoksulluğunu eleştirel siyasal iktisat perspektifinden inceleyerek bu soruna ilişkin kapsamlı bir anlayış getirmeyi amaçlamaktadır. Bu yaklaşım, enerji yoksulluğunun köklerini inceleyerek bu sorunu hafifletmeye yönelik uluslararası çabaların neden yetersiz kaldığını araştırmak maksadıyla benimsenmiştir. Bu çerçevede, enerjinin bir hak olarak tanınmasına yönelik literatüre katkı sağlanması amaçlanmaktadır. Bu potansiyel hak, enerji adaleti (energy justice) yaklaşımı, yapabilirlikler yaklaşımı (capabilities theory) ve uygulama teorisi (practice theory) gibi teorik temellerinin yanı sıra hukuki ve etik temelleri açısından da incelenmektedir.

Enerji hakkını tartışmak için bu tez, insan hakları hukuku çerçevesinde enerjiye ilişkin mevcut normları ve Birleşmiş Milletler ve Avrupa Birliği'nin domine ettiği uluslararası uygulamaları incelemektedir. Bu potansiyel hakka bir temel oluşturmak üzere, tamamlayıcı hakları, "hakların geçişkenliği (permeability of rights)" ilkesi çerçevesinde ele alınmaktadır. Bu incelemenin amacı, enerji hakkı ile diğer ilgili

haklar arasındaki bağlantıların, enerji hakkı bir teorik temel sağlayıp sağlamadığını incelemektir.

Bu tartışmalar ışığında, enerji yoksulluğunu hafifletme ve enerji hakkını geliştirmeye yönelik çabanın etkileri ve eksikliklerine ilişkin bir tartışma da yer almaktadır. Bu bağlamda, enerji hakkı kavramının, enerji yoksulluğu sorununu ele almaya yönelik bir temel sağlayabileceği öne sürülmektedir. Ayrıca, hak temelli çerçevenin, kâr odaklı çabalara ve verimlilik boyutuna odaklanmak yerine, enerji adaleti ve güç yetirebilmeyi (affordabiliy) öncelikler olarak vurgulayarak, enerji yoksulluğunu hafifletme çabalarına dahil olan aktörler arasında devletin rolünü öne çıkardığı ileri sürmektedir.

Anahtar Kelimeler: Enerji yoksulluğu, enerji adaleti, enerji hakkı, insan hakları

To the mother, who, in her deepest silence, bore the unbearable weight of not being able to keep her babies warm.

ACKNOWLEDGMENTS

I sincerely thank my supervisor, Prof. Aylin Topal, for being a constant source of inspiration and support throughout the writing process. I also extend my sincere thanks to my jury members Prof. Mustafa Kemal Bayırbağ and Assist. Prof. Sinan Erensü for their invaluable insights and contributions.

I would like to extend my heartfelt gratitude to the faculty members of my department: Assoc. Prof. Galip Yalman, whose wisdom and kindness have been invaluable; Prof. Pınar Köksal, who is supportive and elegant; Assoc. Prof. Barış Çakmur, whose intelligence is matched by his humility; Prof. Necmi Erdoğan, whose lectures and works on poverty fill me with admiration; Prof. Yılmaz Üstüner, who inspired me to pursue a career in civil service and Prof. Kürşat Çınar, who exemplifies tireless dedication and hard work. I am equally grateful to all the other faculty members, though I cannot name them individually. Their lectures will remain a lasting part of my intellectual journey. As I write these words, a smile spreads across my face. I believe I will always remember them this way.

I would like to express my sincere gratitude to my friends in the department. Their passion for life and politics have been a constant source of inspiration to me. I would also like to express my sincere thanks to my dear friends and my colleagues for greatly enriching both my professional and personal journey. I do not want to know how many times I told them that I was unable to participate in this plan because I needed to study. Also, I must give special thanks to my dearest friend, Pelin Alemdar. She is the gentlest and purest soul. I wish that she always keeps the sparkle in her eyes.

Finally, I have saved the people I am most grateful for last. I would like to express my deepest gratitude to my dear mother and father. Everything I have done are owing to my mother’s unconditional love. Having the most caring mother is one of

the greatest chances in my life. Her brilliant mind and strength always inspire me. My dear father embodies what it means to be a virtuous person through his unwavering honesty and integrity. His courage and decency in both his personal and professional life have played a significant role in shaping the person I am today.

TABLE OF CONTENTS

PLAGIARISM iii
ABSTRACT iv
ÖZ vi
DEDICATION viii
ACKNOWLEDGMENTS ix
TABLE OF CONTENTS xi
LIST OF TABLES xiii
LIST OF ABBREVIATIONS xiv
CHAPTERS
1. INTRODUCTION 1
1.1. The Research Problem 7
1.2. The Research Design and the Structure of the Thesis 8
2. A CRITICAL APPROACH FOR UNDERSTANDING ENERGY POVERTY 12
2.1. A Short History of The Discussions Surrounding Energy Poverty 12
2.2. Examining and Understanding Energy Poverty 15
2.3. Energy Poverty in the International Context 24
2.3.1. Shortcomings of International Efforts 33
2.4. The Political Economy of Energy Poverty 36
2.4.1. Systemic Factors 43
2.4.2. Structural Factors 46
2.4.3. Role of State 50
2.4.4. Main findings of the critical political economic approach 52
3. APPROACHES TO ENERGY POVERTY 55
3.1. Energy Justice 55
3.2. Capabilities Approach in Energy Poverty 62
3.3. Practice Theory on Energy Poverty 63
3.4. Human-rights Approach to Energy Poverty 65
3.4.1. The Lived Experiences of Energy Poor Households 68

4. THE POTENTIAL RIGHT TO ENERGY 72
4.1. Examining The Potential Right to Energy 72
4.2. The Right to Energy Within the Context of Permeability of Rights 77
4.2.1. The Right to Electricity 77
4.2.2. The Right to Life (with Dignity) 79
4.2.3. The Right to Physical and Mental Health 80
4.2.4. The Right to Adequate Housing 81
4.2.5. The Nexus Between Right to Energy, Water and Food Security 83
4.2.6. The Nexus Between Climate Change and Energy Poverty 85
4.2.7. The Challenges of the Potential Right to Energy 91
5. CONCLUSION 93
REFERENCES 98
APPENDICES
A. TURKISH SUMMARY / TÜRKÇE ÖZET 132
B. THESIS PERMISSION FORM / TEZ İZİN FORMU 136

LIST OF TABLES

Table 1. Overview of the Recent Policies/Initiatives of the UN 26
Table 2. Overview of the Recent Policies/Recommendations of the EU 30
Table 3. Comparison of the Approaches of the EU and the UN 32
Table 4. The Shortcomings of International Efforts to Mitigate Energy Poverty 36
Table 5. Overview of the Key Factors of Political Economic Approach to Energy Poverty 38
Table 6. The Key Actors in Energy Poverty Debates 39
Table 7. Main Structural Factor of Energy Poverty 46
Table 8. The Rights Which Are Intertwined with The Potential Right to Energy 77

LIST OF ABBREVIATIONS

CEDAW	: UN Convention on the Elimination of All Form of Discrimination Against Women
CESCR	: Committee on Economic, Social and Cultural Rights
EPAH	: Energy Poverty Advisory Hub
EPOV	: EU Energy Poverty Observatory Hub
EPSU	: European Federation of Public Service Unions
EU	: European Union
IAEA	: International Atomic Energy Agency
ICESCR	: International Covenant on Economic, Social and Cultural Rights
IEA	: International Energy Agency
IRENA	: International Renewable Energy Agency
NGO	: Non-governmental organization
OECD	: The Organization for Economic Cooperation and Development
PPP	: Purchasing Power Parity
TURKSTAT	: Turkish Statistical Institute
UDHR	: Universal Declaration of Human Rights
UK	: United Kingdom
UN	: United Nations
UNDP	: United Nations Development Programme
UNGA	: United Nations General Assembly
US	: United States
WB	: World Bank
WFP	: World Food Programme

CHAPTER 1

INTRODUCTION

The exploitation of energy resources has long been one of the main drivers of capitalist growth (Bellamy & Diamanti, 2018). Energy powers industries, transportation, and technology that fuel economic growth. Without reliable and affordable energy, capitalist development cannot be sustained. Thus, it is deeply embedded in the power dynamics. In addition to being a driver of capitalist development for countries, it is also essential for individual well-being. Energy is the fundamental source of existence and an essential resource that underpins all human activities. Therefore, it is a vital component of human well-being (Thomson et al., 2017; Xiao et al., 2021), poverty, inequality (Galvin & Sunikka-Blank, 2018), and climate change (Sawyer & Hernandez, 2019). It is a significant component by which well-being can be realized (International Atomic Energy Agency [IAEA], 2005). Given the vitality of energy, access to it has become a critical concern for significant part of the world (International Energy Agency [IEA] et al., 2024).

Despite its vitality for life, energy is not unlimited which bring access rights into question. IEA et al.'s (2024) report reveals that as of 2022, around 91 per cent of the global population had access to electricity. This means that approximately 685 million individuals still lack access to it. Furthermore, the same report indicates that under current projections, the energy access gap is expected to narrow slightly, reaching 8 per cent by 2030 (IEA et al., 2024). It means that approximately 660 million individuals will lack access to energy. IEA (2025a) also indicates that access to electricity will maintain to be a problem for a significant portion of the population worldwide.

Having adequate energy in a household is essential for living with dignity (Nussbaumer et al., 2012). Household energy needs have emerged as indispensable

material prerequisites for satisfying human needs and demands (Bridge et al., 2016; Brugger, 2016; Sovacool et al., 2013). Its absence can lead to severe deprivations (Bouzarovski & Thomson, 2018) and vulnerabilities, to the extent that it entails violations of essential human rights (Bradbrook & Gardam, 2006; Huhta, 2023; Tully, 2006). Without reliable and affordable energy, many human needs and social and economic rights cannot be met. In this respect, one can argue that examining this issue is significant, and the issue has been discussed mostly as "energy poverty". European Commission (2022) identifies energy poverty when "a household lacks sufficient energy services to maintain an adequate standard of living". While the energy deprivation has the potential to impact human development and well-being negatively (Bouzarovski & Thomson, 2018). Access to energy has strong implications with the right to life, health, adequate housing, and education (Kyprianou et al., 2023). Being central to well-being has led to discussions framing energy as a "right" (Brugger, 2016; Sovacool et al., 2013; Walker, 2015). In these framework, the conceptualization of the "right to energy" has come to the picture.

According to the Universal Declaration of Human Rights (UDHR), having the ability to stay warm, manage energy costs, and have enough hot water and lighting are considered a fundamental human rights (UN, 1948, Article 25). Article 25(1) of the Declaration asserts that *"everyone has the right to a standard of living adequate for the health and well-being of himself and his family, including food, clothing, housing, and medical care"* (UDHR, 1948, Article 25). Although there has been a growing discussion and a flourishing body of literature within this context, the global picture does not present a favorable one, as mentioned previously. The statistics unveil that the issue remains a significant problem. Moreover, a combination of factors, including the influences of the COVID-19 pandemic, increase in energy prices, and the repercussions of the Ukrainian war, has imposed a substantial burden on households (Jiglau et al., 2023). These direct and indirect burdens on households have a direct impact on the issue. Therefore, discussions surrounding the issue have become more visible in recent years.

From an ecological perspective, many energy production methods require substantial water resources. Also, they often pollute water supplies. This creates tensions

between ensuring water availability for communities and supporting energy demands. Moreover, advocacy for the "right to energy" while critical for individual dignity and economic development, can be controversial within ecology movement because some energy resources contribute to ecological degradation, climate change, and water scarcity. Thus, balancing these rights requires nuanced consideration of sustainability that do not compromise right to water or ecological justice. As energy systems and their relationships with the environment has become more complex, the understanding of energy poverty requires a holistic approach.

Despite the growing body of studies concerning this issue, research examining it from the perspective of those affected, including their energy practices, conditions of action, and coping strategies, remains limited (Boardman, 2010). In this context, despite the existence of a grand perspective on energy as a whole, this thesis does not employ a telescope. Rather, it uses a microscope to examine household energy poverty closely. The scale of this study may be smaller, but the gravity of the issue, being cold in one's own home (if you have one) is immense. Even imagining being in a cold home has a shivery impact on one's mind. The coldness inside one's home invades the very space meant to offer safety, warmth, and comfort. This notion evokes a deep sense of vulnerability. In literature and art, cold can be used as a metaphor for isolation and despair. These are the very emotions experienced by those trapped in energy poverty. Being confined within a cold home, getting through the night is a battle for a significant part of the population. The inability to maintain adequate warmth within households constitutes more than simple discomfort. It is possible to argue that it is a violation of the fundamental capacity to live with dignity. In this regard, one can argue that household energy poverty means not having the means to live a proper life, and enduring living in a cold house is a matter of justice.

The issue of energy poverty has been recognized for many years. As a concept and social issue, it has been recognised since the 1970s, initially triggered by the oil crisis of the time. Discussions concerning the issue became prevalent in the early 1990s, when Boardman (1991) published her work titled "Fuel Poverty". Boardman (1991) defined fuel poverty as the inability to heat adequately and cool homes. The

designation of the intersection between energy and poverty as a distinct term led to the need for the development of public policy aimed at addressing this issue. It also initiated the investigation of its root causes and impacts on households. In this thesis, in line with Bouzarovski's (2018) definition of the concept, energy poverty is defined as a household's inability to secure a sufficient level of energy services[1]. This definition is significant in the sense that it addresses both the material and social aspects of the issue, which are embedded in one another. The material aspect includes protection of health and well-being, encompassing needs such as heating, cooling, lighting, and the use of appliances. The social aspect includes sufficient access to energy necessary for maintaining a standard of living that enables full participation in society.

Energy poverty is currently recognised as a consequence of complex systemic inequalities that hinder access to affordable modern energy (Wang et al., 2024). In this respect, one needs to examine the roots before taking steps to mitigate the issue. Mitchell (2011) argues that meaningful democracy and environmental justice require recognizing the relationship between energy systems and political power. In this context, it is possible to argue that energy in the context of poverty is deeply embedded within power relations. Therefore, any meaningful analysis of energy-related issues needs to surpass technical solutions to uncover the political economic factors. In line with this argument, the thesis adopts a critical political economic framework to investigate energy poverty. This approach situates the issue within the broader socio-political and economic context, recognizing that energy poverty is embedded in the power relations. This framework provides a holistic approach to examine how different actors create, challenge, and put into practice ideas, authority, and resources connected to energy (Tanner & Allouche, 2011). This involves examining how certain narratives come to dominate energy policy and how some actors are more influential in shaping decision-making. By applying this critical political economic lens, one of the thesis's objectives is to examine why efforts to mitigate energy poverty have often remained insufficient. This approach ultimately

[1] Energy services used in households include a wide range of services, which encompass cooking, space heating and cooling, lighting, household appliances, and services that rely on mechanical power (Nussbaumer et al., 2011).

seeks to pinpoint the root causes of persistent energy poverty, providing a foundation for the discussions of energy justice and the right to energy.

As mentioned previously, discussions surrounding energy are as old as history, but discussing energy as a right is a novel concept. The right to energy is a relatively recent addition to the "rights talk", added to the right to adequate housing, food, and water. The right to energy is not yet explicitly codified as a universal human right in international law. However, this novel type of right and rights-talk surrounding energy has been conducted within the framework of human rights, international treaties, and declarations. Within these efforts, the most well-known is the United Nations' (UN) Sustainable Development Goal 7 (SDG7). This goal aims to "ensure access to affordable, reliable, sustainable, and modern energy for all by 2030" (UN, 2017). Along with international organizations' frameworks, it is increasingly recognised by the international human rights law as being fundamentally connected to the realization of various human rights, including those related to housing, water, sanitation, health, and development. In this regard, the International Covenant on Economic, Social and Cultural Rights (ICESCR) and other human rights treaties emphasize the importance of energy regarding its role in protecting some socio-economic rights. However, these treaties do not establish a distinct right to energy.

The thesis also examines energy poverty from the perspective of justice. A discussion on the relatively novel concept of "energy justice" is conducted to highlight the role of household energy poverty in contributing to the discourse surrounding energy poverty from a justice perspective. Framing energy poverty as a matter of justice enables the thesis to consider human dignity and well-being, rather than merely focusing on technical solutions and economic indicators. Examining energy justice and investigating the possibility of "right to energy" provides a framework to understand and address the issue beyond the technical aspects of the problem. Furthermore, examining energy justice points out the interconnectedness of energy poverty with environmental issues as well.

Discussing energy poverty as a justice issue is also meaningful in its connection with climate change issues. This connection stems from the reason that climate change

aggravates the problems that households face. Looking at the issue from a justice perspective highlights the need for climate actions that help protect those who are most at risk. Addressing the issue by taking into account climate change is significant, as they are often seen as two fundamental challenges of the present and the future. In this context, it is possible to propose that the discussion of energy justice needs to incorporate the impacts of climate change and the energy transition.

As highlighted by Simcock et al. (2018), energy poverty goes beyond mere technical or financial difficulties; it is intricately linked to the experiences. Coping strategies that households employ have mitigating effects. While systemic factors cause and sustain energy poverty, the issue remains an intensely personal experience for individual households. Existing macro-level analyses often fail to fully capture the true extent of the problem, underscoring the need for more detailed investigation at the household level. Since the 2010s, researchers have emphasized the importance of adding detailed studies of individual households to general statistics, as this approach gives a clearer understanding of household experiences (Bouzarovski, 2014; Sovacool & Dworkin, 2015). Additionally, recent literature has given particular attention to the "hidden aspects" of the issue (Cong et al., 2022; Simcock et al., 2018; Middlemiss & Gillard, 2015). This aspect is described as hidden because the coping mechanisms and their impacts occur within the private sphere of the home, making them invisible. Additionally, these coping strategies themselves contribute to concealing the problem, as households actively take steps to manage or reduce their energy needs in ways that are not easily observed. Therefore, although it is important to use a critical political and economic approach to understand the main causes of energy poverty, it is just as important to look at how households cope with it. Studying these often-hidden strategies helps reveal the full extent of the problem and contributes to a more complete and holistic understanding.

In light of the above, one can argue that, in addition to examining the issue from a broad, macro-level perspective and its connections to larger concepts and problems, it is equally important to study it at the micro-level. Therefore, to develop analyses and policies that can reduce energy poverty, it is essential to combine political economic analysis with insights from the energy poor and their coping strategies.

1.1. The Research Problem

As discussed in the Introduction Chapter, energy poverty is a challenge currently, and it will remain to be one in the future as well. There are studies that address the urgency of alleviating this issue, especially in the context of the challenges that the future might hold. These studies are especially evaluating the issue concerning the current and future challenges posed by climate change and energy transition. Efforts to mitigate the problem exist at the international, national, and local levels. However, as the studies on the effectiveness and progression of the UN's SDG7 indicate, these efforts remain inadequate.

In addition to the inadequacy of these measures, there is an ongoing "hidden aspect" of the issue at the household level. The existing literature on energy poverty mostly presents quantitative data, focusing on measuring the issue. While such information offers valuable insights, statistics cannot truly reflect the gravity of the issue at the household level. Therefore, one can identify that there is a problem of overlooking the household level. The experiences and struggles of households facing the issue are the realms in which this hidden aspect can be explored. Hence, there is a need to understand the coping strategies which are employed or invented by households. The reason for this central role of households is to ensure that the experiences of households are not overshadowed by broader debates, such as energy efficiency, energy transition or climate change. In this regard, there is a need to take into consideration both macro-level political economic analyses and micro-level household experiences. These interconnected aspects can provide an understanding of the essence of the issue.

Drawing on Bouzarovski and Petrova's (2015) insights into the interconnectedness of energy poverty, justice, and the vulnerability of households, this thesis attempts to provide a holistic approach that incorporates an examination from a political economy perspective at the macro level, while also exploring the household perspective at the micro level. In this framework, this thesis aims to provide a comprehensive understanding of energy poverty to challenge prevailing narratives and emphasize it as a justice issue. In this way, it becomes possible to lay the

groundwork for policy interventions which address the root causes of the issue and prioritize the mitigation of household struggles.

The critical political economic approach and a closer examination of experiences at the household level are provided within this thesis is to create a holistic examination of the issue to construct the ground for the potential right to energy, which prioritize energy justice. Therefore, this thesis can be seen as an attempt to provide a normative framework for this potential right. This framework involves analyzing energy as a right with respect to its theoretical, ethical, and legal aspects.

1.2. The Research Design and the Structure of the Thesis

This thesis aims to contribute to the critical literature on energy poverty by examining the issue comprehensively. It adopts a critical approach to energy poverty and examines the potential right to energy. It critically analyzes the conceptual frameworks surrounding these issues, along with the associated narratives, policies, and their potential consequences. The first pillar of the thesis is the critical examination of energy poverty with a political economic perspective. This pillar represents a systemic challenge intricately linked with economic, social, environmental, and structural dimensions. Within the scope of this pillar, the thesis examines energy poverty through two branches, which are international law (Crossley, 2019; Huhta, 2023) and international organizations (IEA et al., 2024). In light of this examination, the second pillar provides an attempt to explore the potential right to energy. This potential right lacks a clear definition in the existing body of literature. Also, it has not been codified yet. In this respect, there is an attempt to provide an analysis of this right from theoretical, legal, and ethical aspects.

In this framework, this thesis adopts the concept of energy poverty as the primary theme at the macro level. Moving to the meso-level, the thesis focuses on the concept of the right to energy as its object of inquiry. The conceptualization of energy poverty from a critical political economic perspective constitutes the primary problem addressed in this thesis. Through this conceptualization, it seeks to examine

the right to energy. This examination is complemented by a critical examination of the broader human rights framework. At the micro level, the thesis draws upon a comprehensive literature review concerning the framework of the right to energy, as well as past and current efforts. An analysis of the coping mechanisms employed by energy-poor households is presented.

Complementing a critical political economic approach to energy poverty and the theoretical exploration of the right to energy, a qualitative research approach is considered the most appropriate methodological framework. This thesis employs **document analysis** as the primary data collection method to critically explore energy poverty from a critical political economy perspective and to investigate the right to energy. Document analysis involves examining written materials that provide information about the phenomenon under study (Bailey, 1987). The qualitative information is gathered from policy documents and narratives adopted by international actors, including the UN and the EU. In this regard, the selected documents of the aforementioned organizations are analyzed based on two main aspects. The first aspect consists of providing the definition and conceptualization of energy poverty, and the second aspect consists of examining the policies and frameworks aimed at alleviating the issue. The second pillar, which is the right to energy, will be explored with respect to its theoretical, legal, and ethical foundations. The study of theoretical foundations is done via discussing the energy justice approach, capabilities theory and practice theory with respect to energy poverty. The examination of the legal foundations of the issue is done by examining its relationship with other established rights in light of the principle of permeability of rights. The ethical foundation of this right is discussed by taking a closer look at the household level.

Within this framework, the research question of this thesis can be articulated as follows: - *Is the literature and policy documents on energy poverty sufficient in terms of establishing energy as a right?*

The research question invites an analysis of existing literature on energy poverty and the potential right to energy. The question addresses a significant gap in the literature

by critically examining the limitations of existing international frameworks related to the issue.

The minor questions for examining energy poverty and the right to energy:

- *Why do international efforts remain inadequate in addressing energy poverty*?
- *Is the right to energy an effective strategy for addressing energy poverty?*

In this way, the thesis presents two fundamental arguments, offering a response to the questions above:

The right to energy can be deemed an instrument to advance energy justice claims. This right can be effective if it is based on a critical political economic analysis that looks at how deeper systemic and structural issues cause and perpetuate the problem.

However, it is possible to argue that the current status of this right within the dominant conceptualization in the international human rights system and the hegemonic understanding of this right is insufficient for the establishment of it in a meaningful way which have long-term positive impacts upon the issue of energy poverty since the discussions and policies surrounding the issue are dominated by international actors, which tends to focus on efficiency efforts and energy transition without adequately addressing structural and systemic factors as well as addressing energy justice.

Currently, discussions around the issue are dominated by international organizations. By critically examining the influence of actors, the thesis challenges the narratives of international organizations, namely the UN and the EU, which are concentrated upon efficiency rather than the affordability aspect of energy poverty. The critical political economic perspective adopted by this thesis examines how systemic and structural factors create and perpetuate the issue. This approach also emphasizes the responsibilities of states to prioritize energy justice. This examination also provides a challenge to efficiency-centered solutions, which fail to address the problem adequately.

With the research design now outlined, the next step is to present **the thesis structure**.

The second chapter introduces “energy poverty” and relevant concepts, along with a short history of the concept and discussions surrounding it. The aim of the chapter is to provide a critical examination of the issue. Along with this critical examination, the chapter also offers a political economic perspective to the issue with a detailed analysis.

The third chapter provides an examination of the approaches to energy poverty, including energy justice, capabilities approach, practice theory, as well as the human rights approach.

The fourth chapter investigates the theoretical foundations of this right. It also explores the legal and ethical dimensions as well. Within this chapter, this right is examined through the concept of the “permeability of rights”. Additionally, the nexus between energy, water and food security is discussed. In this regard, stemming from the nexus between the right to energy, water, and food security, it is argued that one can infer the significance of the right to energy due to the embeddedness of energy, water, and food security.

Following this introductory chapter, the thesis now proceeds with the conceptual framework of energy poverty, a short history of the discussions surrounding the issue, the root causes of the issue and a review of the efforts to mitigate energy poverty.

CHAPTER 2

A CRITICAL APPROACH FOR UNDERSTANDING ENERGY POVERTY

To examine energy poverty, there is a need to provide a comprehensive review of the literature on energy poverty to understand the issue. This chapter provides a brief history of efforts to address the issue and operationalizes the term. It offers an overview of past and current debates.

2.1. A Short History of The Discussions Surrounding Energy Poverty

Studies on energy poverty often identify the 1970s and 1980s as the origin of the discourse. However, debates on the relationship between energy and poverty have existed since the early 20th century. It may seem a broad approach to the issue but evaluating household poverty can be a starting point for the discussion. Rowntree (1901) provides one of the earliest definitions. It suggests that a household is considered poor if its income is insufficient to meet a set of basic needs necessary to sustain individuals' physical well-being. Rowntree refers to this type of poverty as "primary poverty" (Rowntree, 1901; p. 8). Additionally, political concerns regarding households' ability to afford adequately warm homes predate the introduction of the terms "fuel poverty" or "energy poverty" (Kerr, Gillard, & Middlemass, 2019). For instance, financial support for subsidizing heating costs has been provided in the UK and Ireland since the 1940s (Boardman, 2010; Healy, 2003).

The early systematic discussions of energy poverty were conceptualized using the term "fuel poverty", which emerged during a time of prevailing concerns about fuel scarcity. Hence, beginning in the 1970s, discussions regarding the energy scarcity of households were discussed under the name of "fuel poverty". This concept emerged during the oil price shock of the 1970s. In this decade, there were widespread energy

concerns. Prior to the conceptualization of “energy poverty”, Isherwood and Hancock (1979) defined fuel poverty as a condition in which individuals or households encounter difficulties in paying for fuel bills. It was a novel idea to examine this issue about the proportion of household income spent on fuel. Following this broad definition of fuel poverty, conceptualized as a situation where households struggle to pay for fuel, Bradshaw and Hutton (1983) offered a particular focus on the vulnerability aspect of the issue. They suggest that fuel poverty stems from the “inability to meet essential energy requirements for adequate warmth, lighting, and other necessary services” (Bradshaw and Hutton, 1983). Also, the connection between poverty and access to energy services was examined in the 1987 report titled “Report of the World Commission on Environment and Development,” also known as the Brundtland Report. The report acknowledged the importance of providing energy services (Huhta, 2023).

This issue became more widely recognized by the 1990s. An important work on the topic is Brenda Boardman’s 1991 study called “Fuel Poverty.” In this study, she introduced the “10 per cent” indicator. This indicator has been utilized as the UK’s official definition of energy poverty. The indicator is not restricted to the UK’s conceptualization, but it has been widely adopted in policy discussions and research. It also served as the basis for the UK’s “Fuel Poverty Strategy” adopted by the government to mitigate the issue. According to this indicator, a household is considered fuel poor if “it spends more than 10 per cent of its income on energy bills” (Boardman, 1991). Boardman (1991) points out that the main reason for the problem is that homes are energy inefficient due to inadequate investment in improving their quality. Because of this, these homes have high heating costs, which hit low-income households hardest since they pay the highest heating bills.

Besides being a pioneer in conceptualizing “fuel poverty”, the UK is also a pioneer in policymaking for the alleviation of energy poverty. The efforts by the UK government to mitigate the issue have been the result of grassroots demands. In the 1970s, households were negatively impacted by the oil crisis, and demand increased from civil society. These demands also led to the prevalence of the idea of energy as a justice concern, which will be discussed within the scope of this thesis. Following

the recognition of fuel poverty as a distinct issue in the 1990s, discussions in the literature and policy recommendations to mitigate the problem have been brought to the international agenda, surpassing the borders of the UK (Bouzarovski & Petrova, 2015). These discussions have accelerated with the acknowledgement of the issue by EC and IEA (Heffner et al., 2011). In the context, the UK case provides an example that naming the issue of energy deprivation within a country can yield various benefits for its mitigation.

In addition to the significance of recognizing and labelling energy deprivation in households, the UK also exemplifies the negative implications. It demonstrates practical approaches that should be avoided, having adopted a perspective primarily centered on "energy efficiency" rather than addressing the underlying causes of the issue, which stem from a combination of low household income and high energy prices. The measures and policies implemented by the UK government suggest that its primary focus is on efficiency. One can argue that the government's policies provide insufficient solutions addressing the affordability aspect of the issue. This approach aligns with international organizations, which mostly provide solutions from an efficiency aspect. Conversely, the UK has also introduced income support and financial assistance programs to provide aid to low-income households. In this regard, the UK serves as an example of implementing effective short-term solutions. However, its policies also serve as an example of lacking adequate long-term solutions.

In 2000, the relationship between energy and poverty was clearly articulated on a global scale in an extensive report titled "World Energy Assessment: Energy and the Challenge of Sustainability.", which indicated that,

> *"Energy services are a crucial input to the primary development challenge of providing adequate food, shelter, clothing, water, sanitation, medical care, schooling, and access to information. Thus, energy is one dimension or determinant of poverty and development, but it is vital."* (UNDP, 2005, p. 44).

The aforementioned report shows that household energy services are essential for meeting fundamental needs. With this emphasize, it can be seen that this report

broadens the discussion by highlighting how complex and multi-faceted the issue is.

Since the 2000s, the issue has been increasingly recognized as multidimensional. There is also increasing awareness of how important the affordability aspect is. In this regard, Pachauri and Spreng (2004) recommend using a multidimensional framework that includes both access and affordability aspects. They argue that accounting for both aspects can provide effective policy interventions (Pachauri & Spreng, 2004). Also, starting in the 2010s, the issue has been recognized as a complex, systemic, and structural challenge. Bouzarovski and Petrova (2015) stress the importance of systemic factors that cause the issue to emerge in the first place. They name these factors as income inequality, institutional frameworks, political and economic conditions, infrastructure patterns and housing quality (Bouzarovski & Petrova, 2015).

By the end of 2020, energy prices rose to record highs, and these higher prices negatively affected households. This situation led some states, especially in Europe, to implement measures to mitigate the household burden (IEA, 2021). Recent research has examined the issue from a wider perspective. These studies point out importance of it for the well-being of households (European Federation of Public Service Unions [EPSU], 2025). Additionally, energy poverty not only puts danger to well-being, but also increases existing inequalities. Therefore, it leads to a cycle of poverty. In this framework, the potential "right to energy" comes into focus, which is discussed in the following chapters of the thesis.

2.2. Examining and Understanding Energy Poverty

Since poverty lacks a clear-cut and straightforward definition, as does the term "energy", defining "energy poverty" is a challenging task. Prior to discussing "energy poverty", there is a need to point out the ambiguity of both the terms "poverty" and "energy". Starting with "poverty, the Human Development Report (2010) highlights that poverty is not a permanent condition. It is a multi-faceted issue that includes aspects such as food consumption, energy access, housing conditions,

and many other elements (UNDP, 2010). Despite this complexity, poverty is often measured and quantified through a more straightforward economic lens, which is household income. D'Agostino (2010) points out that a common international benchmark, called "the international poverty line". This benchmark has been used as a measure of extreme poverty. World Bank (WB) provides estimations according to this line. In 2022, WB indicated that the global extreme poverty rate was 10.5%. It means that 838 million people lived below the poverty line (WB, 2025). According to WB's 2024 projections, 7.3% of the world's population, 622 million people, will remain in extreme poverty by 2030 (WB, 2024). This forecast shows that the problem is still very large in scope.

Energy itself is a broad concept encompassing various types, sources, and uses, which makes pinpointing what it means to be "energy poor" even more complicated. It encompasses a wide range of meanings both in everyday language and in specialized fields. Illich (1983) describes energy as a "verbal symbol", a "collage of meanings" lacking a singular, clear-cut definition. The notion of energy as a resource, available for consumption either commercially or outside market systems, integrates various forms of material substances and energy flows. The category of "energy as a resource" is quite diverse. It encompasses wood, coal, oil, wind, natural gas, hydropower, and others. Therefore, it is significant to consider the specific forms of energy being evaluated, when addressing the issue. Within the thesis, the household is the unit of analysis; hence, energy is evaluated in terms of the domestic energy services utilized within a household.

The nexus between poverty and energy reveals itself within the framework of socio-economic inequalities. Energy poverty, like other types of poverty, is directly linked to broader socio-economic inequalities. Household energy poverty can be discussed as the combination of three main factors, which are low household income, high energy prices and low domestic energy efficiency (Simcock et al., 2021). Zheng et al. (2023)'s study identifies household income as the most critical factor affecting household energy usage and is pivotal in determining the affordability of household energy consumption. Although household income is the critical element of the household's energy poverty state, there is a significant gap in research exploring the

relationship between income inequality and energy poverty (Wang et al., 2024). On the other hand, the issue cannot be reduced to income poverty. A household can be energy poor even though it is not income poor (Boardman, 2010; Buzar, 2007a). Energy poverty differs from absolute poverty because it affects a wider range of people. It includes households that are not officially considered absolutely poor. Even when these households have access to energy, those with the lowest incomes often spend a much larger share of their earnings on energy costs. One reason for this is the high initial expense of energy-efficient technologies, which can be a big financial barrier for low-income families (Simcock et al., 2018). According to Emre and Sozen (2022), even households that are not classified as absolutely poor can still face energy poverty. While poverty remains a central factor in household energy poverty, as previously discussed, energy poverty can be experienced by households with income levels above the poverty threshold. It stems from the fact that energy poverty is a combination of low household income, high energy prices, and household energy inefficiencies.

As noted previously, energy poverty was originally called fuel poverty. Over time, several different terms have been used to describe the issue, each with its own slight differences in meaning. Both terms refer to households being unable to obtain enough energy to meet their basic needs and support their well-being. While specific studies regard energy poverty and fuel poverty as separate concepts (Li et al., 2014), it is prevalent in the literature to use these terms interchangeably (Nusbaumer et al., 2012). In some studies, subtle distinctions are made between the two concepts, specifically in the differentiation between accessibility and affordability. The prevailing consensus in the literature holds that energy poverty refers to the lack of access to modern energy services.[2]. According to this conceptualization, this problem mostly exist in developing countries. On the other hand, fuel poverty addresses the challenges related to energy affordability. According to this conceptualization, it is experienced in developed nations (Buzar, 2007; Li et al., 2014). There is also a differentiation between fuel poverty, which specifically focuses on affordability, and

[2] For the purposes of this thesis, access to modern energy services encompasses both household and community access to electricity and clean fuels. These energy sources can be utilized for various purposes, including illuminating homes, workplaces, and educational institutions, as well as providing heat for cooking and powering water and sanitation systems.

energy poverty, which refers to the overall ability to secure energy. Although the terms are occasionally used synonymously, energy poverty encompasses a broader spectrum of energy-related difficulties experienced by households beyond just heating requirements. Given that energy poverty offers a broader framework for discussing human rights issues, the term "energy poverty" is used within this thesis.

As a recent addition to the discussions of energy poverty, the term "energy precarity" has been used within the literature as well as embraced by non-governmental agencies. Although energy poverty and energy precarity are mainly used interchangeably within the literature, the former provides a broader concept than the latter. Different from the broader notion of energy poverty, which primarily addresses the inability to afford energy due to financial constraints, energy precarity highlights the unstable and politically or structurally driven uncertainties surrounding access to energy (Bouzarovski et al., 2020; Bouzarovski & Simcock, 2017). The insecurities faced by households experiencing energy poverty are influenced by factors such as social inequalities, state policies, and housing quality. Hence, the term enables us to denote a specific aspect of the general issue. It is generally used to address the political responsibility. This concept is worth noting since it underlines the existence and perpetuation of the issue as a failure of political systems, thereby necessitating a political response. Furthermore, it underscores that energy poverty is a matter of systemic injustice with identifiable underlying causes.

Lastly, the issue of energy poverty is typically assessed through macro-level indicators. These indicators do not reflect the full extent of the challenges faced by households (Nussbaumer et al., 2012; Siksnelyte-Butkiene et al., 2021). This shortcoming has led to the introduction of the concept of "energy vulnerability". It refers to households that are at risk of being unable to afford energy consumption for their homes in a reasonable manner (Daniel et al., 2020). For low-income households, energy expenses can constitute a significant portion of their available income. It means that energy expenses put a significant burden on the households. This concept provides an opportunity to cultivate a more nuanced understanding of households' interactions with energy (Bouzarovski & Thomson, 2017). The concept links the issue with broader literature on vulnerability that aims to understand and

alleviate threats to individuals' well-being. Also, this concept highlights the policy shortcomings that contribute to the perpetuation of this issue (Petrova, 2018; Stojilovska et al., 202).

Middlemiss and Gillard (2015) provide an examination of energy vulnerability by exploring it through the lived experiences of energy-poor households in the UK. They examine the issue from the perspectives of interviewees and identify six primary challenges contributing to vulnerability among the energy poor: the quality of dwelling fabric (to demonstrate poor insulation and inefficient housing construction), energy costs and supply issues, stability of household income, social relations both within and outside the household, ill health, and tenancy relations. Middlemiss and Gillard (2015) note that despite the UK's significant amount of policies which address the issue, they do not fully address the root causes of the issue. They argue that it is essential to engage with structural forces, including policies, markets, and recognition, to enhance household for change. In this respect, this conceptualization signifies that this issue cannot be overcome by the households themselves. It points out the need for wider, structural solutions. There is a need of addressing social, economic, and political causes underlying the issue. Therefore, one can argue that there is a need to address both the individual experiences and structural factors.

In light of these discussions, one can argue that different names indicate different conceptualizations of the issue. The conceptualization of poverty is of critical importance in determining the most effective methods for addressing it (Lister, 2021). Therefore, the definition of poverty directly affects proposed solutions. This is particularly valid in the context of energy poverty because the definition directly shapes the responses. Nussbaumer et al. (2012) underline the significance of the definition by arguing thar how the issue is defined has a significant role in effectiveness of mitigation efforts. Defining the boundaries helps to assess how serious the problem is, and decide how to allocate resources. Therefore, having a clear conceptual framework is crucial for effective solutions. This framework also explains the root causes and signs of the issue. It also provides a foundation for developing adequate solutions. The conceptual framework directly influences the

success of efforts to alleviate energy poverty and advance the right to energy for all.

After reviewing how the conversation around this issue has developed, it is important to carefully consider what "energy poverty" actually means and to address the uncertainties and limitations in how the term is used.

Energy poverty lacks an agreed-upon definition. In its broadest sense, household energy commonly implies difficulties stemming from inadequate energy services (Bouzarovski and Petrova, 2015). In its broadest description, energy poverty is the inability to secure adequate energy services in a household (Thomson et al., 2017), and the complexities surrounding energy poverty make it challenging to reduce the prevalence of the problem. The root causes of energy poverty are linked to household income, access to affordable energy, and the quality of housing (Bouzarovski, 2014; Thomson et al., 2016). According to Thomson et al. (2016), energy-poor households either spend an excessively high portion of their income on energy, sacrificing other necessities such as adequate food, or they reduce their energy spending, resulting in a lower standard of living, including not heating their homes during cold periods. Often, energy poor households use both approaches at the same time to manage their limited financial resources (Anderson et al., 2012; Thomson et al., 2016).

Energy poverty is a specific form of household energy deprivation that limits access to the social and material necessities essential for participation in society. However, it is often not treated as a distinct problem. Recognizing it as a distinct issue is a first step in devising responses. In this regard, the UK is a prominent example. It is the first country to adopt an official definition of the issue naming "fuel poverty". Households in the country had faced adverse effects from rising energy costs stemming from the 1973 oil crisis. The rising energy costs led to the acknowledgement of the issue. It also led the UK government to take actions regarding the issue. In the UK, this concept has been a tool for recognizing and addressing the issue through various policies (Day & Walker, 2013; Hills, 2012). Acknowledging this issue as a distinct problem give stakeholders the proper tools to tackle it effectively. Address it a distinct problem, rather than just a part of wider

poverty issues can provide a ground for coming up with effective solutions (Bednar & Reames, 2020). Following this official recognition, the UK has implemented policies to address and mitigate the severity of the problem. This recognition led to a legal obligation to develop strategies for combating fuel poverty, providing clear policy objectives for households across the UK (Bednar & Reames, 2020). Therefore, one can argue that an official recognition along with a clear definition is essential for mitigating this problem.

Energy poverty has been increasingly discussed across national and international organizations, civil society, and the private sphere, especially after the negative impacts of rising energy bills upon households. Government agencies, civil society organizations, international organizations, and other stakeholders have been involved in various programs aimed at mitigating the issue. However, despite the efforts of these various stakeholders, it is apparent that the main target of these efforts is not effectively directed toward alleviating these issues. In terms of the funds channeled toward rural energy, they constitute only a small fraction of the total funds allocated for the expansion and transformation of the energy sector in developing countries. The commercial energy segment has received the majority of attention and investment (Sagar, 2005). However, the resources on improving household energy use do not match the scale of the problem.

Energy poverty needs to be examined holistically. The issue necessitates considering the economic, social, and environmental dimensions related to access and affordability aspects. Therefore, there is a need of a context-specific approach. Thema and Vondung (2021) underline that measurements cannot be universally applied due to their dynamic and culturally sensitive nature. Also, The European Commission's (2022) report highlights the importance of devising a national definition. The report emphasizes that a national framework is crucial for informing policymaking and monitoring its prevalence. In this respect, it is possible to indicate that the first step toward establishing a framework involves creating an official definition. It needs to be tailored to the specific characteristics of the nation in question. By establishing an appropriate framework, it would be possible to take into account the specific conditions of the country in question. The significance of

adopting such a definition has become apparent in less than a decade. In 2018, only four countries in Europe accepted an official definition of energy poverty, which are France, Ireland, the United Kingdom, and Slovakia (Bonatz et al., 2019). In less than a decade, this number has nearly reached a dozen countries. Countries such as England, Ireland, Scotland, Wales, Northern Ireland, France, Slovakia, and Cyprus have developed their official definitions of the issue (Rademaekers et al., 2016). It is essential to adopt a country-specific definition of energy poverty, as this allows for targeted efforts to identify and address the issue.

An official definition, along with a thorough assessment of the issue, requires an in-depth analysis of its underlying causes and effects. This analysis needs to take into account of the specific conditions within each country where energy poverty is assessed. Understanding the unique socio-economic, cultural, and environmental factors aggravating the issue is essential for developing effective policies tailored to the needs of affected communities (Gonzalez-Pijuan et al., 2023; Stojilovska et al., 2022). Aligning both definitions and measurements with local contexts is crucial to ensure that efforts to mitigate the problem are adequate (Energy Poverty Advisory Hub [EPAH], 2022; Mashhoodi et al., 2019). Additionally, defining energy poverty with a focus on affordability rather than efficiency, and prioritizing the well-being of households instead of treating them simply as consumers, would help protect vulnerable groups in terms of energy access.

After adopting an official definition, it is also necessary to quantify the issue to reveal its severity; thus, official recognition must be followed by measuring energy poverty. Measuring the severity of the issue presents challenges due to its private nature within households, cultural specificity, and dynamic changes influenced by geography. Measuring energy poverty bears some challenges similar to those in broader poverty measurements. They often result in underestimation of the issue. This leads to insufficient responses. Therefore, more advanced approaches are necessary to identify and assess the extent of the issue accurately (Thomson et al., 2017). In response to these challenges, Cong et al. (2022) propose a novel concept called the “energy equity gap”. Traditional measures often focus on the share of household income spent on energy. However, this can be misleading because some

households cut back on their energy use to save money. Therefore, this practice hides their struggle to effort energy. Cong et al. (2022) argue that energy equity gap addresses this by comparing the outdoor temperatures at which high-income and low-income households begin adjusting their energy consumption. By this comparison, it can be possible to identify hidden energy insecurity and behavioral differences across different income groups. This approach offers policymakers a more accurate tool to identify and support vulnerable households (Cong et al., 2022).

In addition to a country-specific identification and assessment of the issue, some cases move a step forward in alleviating energy poverty by devising a national roadmap. The necessity of a national roadmap was underlined by the EU Commission by publishing recommendations in 2023. The commission report indicates that member states are obligated to include measures addressing energy poverty in their regularly updated National Energy and Climate Plans (European Commission, 2023). Also, as an instance of the national efforts, Portugal adopted the "Long Term National Strategy to Combat Energy Poverty" in 2021. With this strategy, the country set a goal of eliminating the issue by 2050. The strategy initially focused on improving household energy performance. Later, it expanded to enhancing access to energy services and raising public awareness about energy issues. By establishing a country-specific definition of the issue and adopting a long-term national plan, the country has made a significant commitment. This commitment declares the state's responsibility to tackle with this issue. This approach also represents a significant step forward in policymaking. However, the current strategies may be insufficient because they do not fully address the root causes. For a national target to be effective, a holistic approach is necessary. The framework of this target needs to include clear definitions, address underlying factors. Also, there needs to be monitoring systems. Moreover, it is essential to involve local-level targets and adjust policies based on needs of local communities.

In light of these insights, one can conclude that establishing a national definition of energy poverty, implementing a comprehensive long-term strategy, and appointing a dedicated institution for monitoring progress constitute a cohesive framework capable of alleviating the problem.

2.3. Energy Poverty in the International Context

International organizations offer data, conduct analyses, and facilitate international collaboration. They establish frameworks to mitigate the issue. In this respect, it is possible to indicate that they shape how the issue is addressed. By taking a dominant role in defining concepts, establishing indicators to measure the issue, and offering policies for guidance, international organizations significantly influence the conversation about the issue. While examining the issue in the international context, there is significant emphasis on the UN and the EU, as the majority of the literature and public and private efforts surrounding this issue are heavily dominated by discussions which have taken place by these two international actors. Therefore, one can argue that the UN and the EU dominate discussions surrounding energy poverty. In this context, the framework of international organizations' approaches to energy poverty will be outlined, starting with the UN, to demonstrate their stance on this issue, followed by the EU's efforts to handle the issue.

Emphasis on the UN can be justified given its pivotal role in the establishment and perpetuation of the international human rights regime. The UN has a significant role in discussions surrounding energy poverty, being frequently cited in nearly all related discussions, particularly over the past decade. Löfquist (2020) point out the fact that the bulk of the literature concerning energy poverty is mostly influenced by the UN's approach to the issue. Discussing the UN's role is also significant in the sense that it has a key role coordinating international cooperation on energy through its principal mechanism, UN-Energy, which is an interagency mechanism to coordinate and enhance collaboration among various UN entities on matters related to energy. Due to the dominance of the UN's approach, one can discuss that it shapes the way energy poverty is defined, assessed, and tackled in academic studies and policy debates globally. In this respect, this part of the thesis aims to examine the key aspects of the UN's approach to energy poverty and the right to energy, to establish a foundational understanding prior to engaging in the discussion on the right to energy.

The UN has not expressly recognized the right to energy as a universally binding human right in a comprehensive treaty. Despite challenges, the UN General

Assembly has formalized certain rights related to energy poverty. Access to energy, and electricity in particular, is regarded as essential for ensuring human rights. It is also acknowledged as essential for reaching sustainable development goals. There is a sole international treaty which explicitly refers to household electricity access within Article 14(2)h of the UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW). The article safeguards the rights of women residing in rural areas by recognizing their right to electricity as an integral component of the right to an adequate standard of living. While CEDAW is unique in explicitly mentioning access to household electricity, other international human rights treaties contain provisions that have been interpreted as relevant to the right to energy. The relevance of the right to energy with other rights is discussed in the following parts of the thesis. Besides the explicit acknowledgement of the right to household access to electricity, numerous reports and declarations from the UN link access to energy with broader human rights and development objectives.

The UN declared 2012 as the "International Year of Sustainable Energy for All" to mobilize public and private sectors, as well as civil society entities, to achieve three energy-related goals by 2030, including ensuring universal access to modern energy services (Sovacool, 2012). It did not remain for one year. The UN also designated the period from 2014 to 2024 as the UN Decade of Sustainable Energy for All (SEFA) with the aim of advocating for "universal access to sustainable and modern energy services". The Sustainable Development Goals (SDGs), adopted by the UN in 2015, established a comprehensive framework that provides a global objective for the discourse on "eradicating poverty," while also addressing the implications of energy poverty. The UN emphasizes that the SDGs encompass goals aimed at ending poverty and ensuring access to "affordable and clean energy". With the adopting of SDGs, the UN declares that it advocates for "universal access to affordable, reliable, sustainable, and modern energy" as a key component of its SDG 7, with the aim of ensuring energy access for all by 2030. Hence, one can argue that there was a declaration of the commitment to mitigate energy poverty, even though it does not directly use the term. As a result of the UN's global development objectives, the concept of energy poverty has attracted increased attention in academic literature and has emerged as a widely discussed global issue.

Table 1. Overview of the Recent Policies/Initiatives of the UN

UN Framework / Initiative	Policy Focus / Recommendations	Conceptualization of Energy Poverty (EP)
UNDP Energy Poverty Definition and Strategic Approach	Strengthening national policy and institutional frameworks, mobilizing financing, scaling up energy service delivery at local levels.	EP is the lack of sufficient choice in accessing adequate, affordable, reliable, high-quality, and environmentally friendly energy services that support economic development.
Sustainable Energy for All Initiative	Global goal to ensure universal access to modern energy services by 2030.	EP is the lack of access to modern energy services, particularly electricity and clean cooking solutions.
UN Millennium Development Goals (MDGs) and Energy Access	Integration of energy services as critical to poverty reduction, health improvements, and gender equality.	EP relates to absence of access to modern, reliable energy needed for development outcomes including poverty alleviation and health.
UN Economic and Social Council (ECOSOC) Recommendations	Calls for international cooperation to improve access to affordable, reliable, socially acceptable, and environmentally sound energy, with focus on rural and poor populations.	EP is the lack of access to reliable and affordable energy services central to poverty eradication and sustainable development.
IIASA Energy Poverty Measurement Framework (in collaboration with UN actors)	Proposes a simplified, multidimensional measurement framework distinguishing between power supply quality and end-user circumstances.	EP is a multidimensional condition encompassing quality of energy supply and household circumstances, enabling more precise policy targeting.
Global Covenant of Mayors - Energy Access and Poverty Framework	Local-level energy poverty monitoring, data collection, and policy implementation support.	EP is a diverse, multifaceted issue driven by low-income, high-energy costs, and poor building efficiency, affecting health, education, and social outcomes.

By examining the UN's recent frameworks and initiatives provided in Table 1 for an overview, it can be argued that the UN's approach regards energy poverty as a fundamental development challenge. Also, within the UN's frameworks, there is an emphasis on the multi-faced nature of the issue, which necessitates both closer international cooperation as well as cooperation between local, national, and international efforts. The frameworks and initiatives emphasize integrated policy frameworks, which incorporates local level efforts with international efforts.

In a nutshell, the UN predominantly presents energy poverty as an efficiency issue, instead of being an affordability issue, which serves as a leverage mechanism for the private sphere. However, conceptualization of energy poverty within the framework of rights leads to state-centered approach, which is discussed in the following chapter

of this thesis. Along with the UN, the EU has a significant role in shaping the discourse surrounding the issue. Their conceptualization of the issue also shapes policies. As a regional supranational organization, the role of the EU is examined in terms of energy poverty discussions with an introduction of energy poverty in the European context.

The EU has been addressing the issue of energy poverty for nearly two decades. Also, it has been devising strategies over the past decade to encourage its Member States to take action on the issue. It has been recognized as a significant issue within the Union, attracting growing academic interest and public discourse, particularly following the economic crisis that began in 2007 (Bouzarovski & Tirado-Herrero, 2017). In the past decade, efforts have accelerated to mitigate this problem, but there has been a lack of effort to solve the problem at its roots. According to the Council of Europe Development Bank Report (2019), energy poverty persists as a widespread systemic issue across the continent. The aforementioned report also indicates that this issue forces low-income households to cut their energy spending to be able to afford their other essential needs.

Several EU institutions, including the "EU Framework", have designated energy poverty mitigation as a "policy priority". It has been a policy concern, particularly with the restructuring of electricity sectors across the EU countries, as it has had an aggravating impact on households' energy poverty. This restructuring has resulted in significantly increased prices for households. Chester and Morris (2011) found that in some areas, energy prices more than doubled between 2000 and 2010. Due to this sharp rise, households have had to spend a significant amount of their disposable income on energy bills. Chester and Morris (2011) argue that this situation has given rise to a new form of energy poverty directly associated with the rapid escalation of electricity costs linked to the restructuring of the energy sector.

Energy issues in the EU have grown, especially after the 2020 energy supply crisis. Xin and Zhang (2023) indicate that the situation had worsened due to Russia's invasion of Ukraine. IEA (2023) also underlines that the decrease in Russian natural gas supplies caused shortages in many countries, resulting in a sharp increase in

energy prices. Consequently, this situation has driven many households into energy poverty. In this context, with 2020 onward, reactions to rising energy prices intensified. In response to these growing pressures, various measures have been implemented to alleviate the issue by the states. Consequently, especially in the last decade, addressing the issue has emerged as a primary focus on the political agendas of the EU.

As reported by Eurostat, more than 41 million individuals in the EU were unable to maintain adequate warmth in their homes in 2022. This constituted 9.3% of the population. In this regard, these statistics underscore the prevalence of this issue (Eurostat, 2022). This suggests that many households across the EU may struggle to keep their homes adequately warm. The Eurostat (2022) also indicates that this situation might lead households to compromise their ability to maintain a healthy life. Despite significant efforts, levels of household energy poverty are not diminishing. In line with the EU's data and arguments, the OECD Affordable Housing Database (AHD) indicates that at least ten per cent of low-income households face difficulties in maintaining adequate warmth in their homes in many countries. The substantial increase in energy prices during 2021 and 2022 has further intensified the challenges associated with keeping residences adequately heated across numerous nations.

The EU's definition of the term emphasizes that the issue occurs "when a household must reduce its energy consumption to a degree that negatively impacts the inhabitants' health and well-being" (European Commission, 2022). Also, the EU provides an indicator to assess energy poverty, being the "inability to keep a home adequately warm. The EU Pillar of Social Rights, adopted by the Council in 2017, sets out 20 key principles for building a better welfare system, including access to essential services. The 20th principle indicates that "everyone has the right to access essential services of good quality, including water, sanitation, energy, transport, financial services, and digital communications." (European Commission, 2017: 22). This principle outlines various indicators related to the issue. These indicators include the inability to maintain adequate warmth, and the proportion of income allocated to energy expenses (EPSU, 2025).

The EU has implemented measures to address the issue by introducing the Directive 2009/72/EC. This Directive recognizes this growing issue and emphasizes the necessity for incorporating it in national plans to combat it. The Directive also points out the responsibility of Member States to ensure a sufficient energy supply for vulnerable "consumers". It is noteworthy to indicate that the Directive uses the term "consumers" instead of specifically mentioning citizens, individuals, or households affected by energy poverty, a distinction that will be explored through the lens of the political economy of energy poverty in subsequent sections of the thesis. On the other hand, it falls short of tackling the root causes of the problem. The responsibility placed on states to support energy efficiency improvements represents a significant inadequacy in efforts to mitigate the issue effectively.

After a decade, one of the prominent steps taken by the EU was in 2019, when the EU Electricity Directive 2019/944 made member states legally obliged to establish criteria for defining and measuring energy poverty within their respective national contexts. Consequently, member states have been required to set a "national objective" to address this issue. The member states have developed frameworks of policies with time frames aimed at mitigating the problem. The aforementioned Directive also requires member states to evaluate the "necessary domestic energy services for basic standards of living in their national context." Hesselman (2023) points out that this language is reminiscent of international human rights law. Also, the EU Directive 2023/1791 establishes the first Union-wide definition of energy poverty, along with measures to prioritize energy efficiency and building renovations for energy-poor and other vulnerable groups. Lastly, the most recent EU directive addressing energy poverty is the amended Energy Performance of Buildings Directive (EU/2024/1275). This Directive requires EU Member States to include plans to reduce the issue in their "National Building Renovation Plans".

In addition to the aforementioned various EU regulations, there have been efforts to monitor progress in alleviating energy poverty. In 2016, the EU launched the Energy Poverty Observatory (EPOV), a project supported by the EU that functions as a public platform for gathering and disseminating information on household energy poverty in Europe (European Commission, 2018). In 2021, the EU launched the

EPAH and the “Fit for 55” package. EPAH’s mission is to serve as the central platform for expertise in Europe. The significance of the EPAC example lies in bringing together all stakeholders to discuss energy issues. The significance of EPAH is that it underlines the necessity of a grassroots approach because towns, cities, and regions are often in the best position to identify households at risk of energy poverty at an early stage. Therefore, the more effective way to address the issue begins at the local level (EPAH 2022). This hub (2022) emphasizes the critical role of local authorities in addressing energy poverty. It also highlights the inadequacy of bottom-up data, which presents a significant challenge throughout all stages of the energy poverty action process and severely impedes quality impact assessments.

Table 2. Overview of the Recent Policies/Recommendations of the EU

Name of The EU Policy / Recommendation	Policy Recommendations / Measures	Conceptualization of Energy Poverty (EP) within the Policy/Recommendation
EU Recommendation on Energy Poverty (2023)	Promotes investments in energy efficiency and renewable energy to address root causes like poor housing energy performance and high costs.	EP is the inability to keep homes adequately warm or afford basic energy services, linked to low energy performance of dwellings, high energy expenditure relative to income, and socio-economic vulnerability.
Social Climate Fund (SCF) (2023)	Provides funding to support vulnerable households and micro-enterprises with energy efficiency investments, clean mobility, and renovations to mitigate energy poverty and the impact of carbon pricing.	EP is framed as a socio-economic condition aggravated by energy costs and the transition to low-carbon energy, emphasizing financial vulnerability and the need for targeted social protection.
Revised Energy Efficiency Directive (EED) (EU/2023/1791)	Strengthens focus on alleviating energy poverty through consumer empowerment, improved energy performance of buildings, and targeted national measures including data collection and monitoring.	EP is defined as difficulty in accessing affordable and efficient energy services, highlighting affordability in relation to income and energy needs.
Revised Energy Performance of Buildings Directive (EPBD) (EU/2024/1275)	Requires Member States to include specific energy poverty reduction objectives in National Building Renovation Plans, prioritizing social housing and vulnerable households, focusing on improving housing	EP is associated with poor quality housing and inability to cover energy needs, with emphasis on housing conditions and social vulnerability, especially in social housing sectors.

Table 2. (continued)

	quality to reduce energy consumption and costs.	
Electricity Market Design and Gas Market Legislation Reform (2024)	Strengthens consumer rights, guarantees protection from disconnections especially in gas crises, ensures affordable energy access for vulnerable consumers, and mandates clear information provision.	EP is a problem of energy affordability and security for vulnerable groups, highlighting the risk of disconnection and supply insecurity especially under price volatility.
National Energy and Climate Plans (NECPs) (2024 Update)	Requires Member States to identify, monitor, and address EP through national policy frameworks with measurable targets and social measures.	EP is nationally diagnosed, but based on the EU definition focusing on affordability, energy needs coverage, and vulnerability, embedded within climate and energy policy planning.
Energy Poverty and Vulnerable Consumers Coordination Group (2022)	Facilitates sharing of best practices and coordination among EU countries on policy measures to support energy-poor and vulnerable households, promoting harmonized approaches.	EP is a multidimensional, requiring integrated social, economic, and technical policy responses; acknowledges variations in definitions at national levels.
EPAH (2021)	Provides technical assistance, capacity building, data tools, and knowledge-sharing for local and regional governments to develop and implement energy poverty mitigation policies.	EP is a complex socio-technical issue involving affordability, housing conditions, and social vulnerability, underlining the need for accurate diagnosis and targeted local solutions.
European Green Deal (2019) & 'Fit for 55' Package (2023)	Embeds EP alleviation within broader climate goals by prioritizing a just transition, social inclusiveness, and environmental sustainability in energy policies.	EP is linked to broader systemic issues, defining it by inequalities in energy access, affordability, and participation in a green economy transition, highlighting social justice perspectives alongside technical aspects.
Action Plan on Affordable Energy (2025)	Implements measures to make electricity bills more affordable via network charge reforms, enhances gas market competition for fair prices and expands financing for energy-efficient appliances and renovations.	EP primarily stems from the lack of access to affordable, reliable energy services aggravated by market failures and price volatility, emphasizing consumer empowerment and cost reductions.

By examining the EU's recent policies and recommendations, as outlined in Table 1, it can be argued that the issue is identified as a socio-technical one, with an emphasis on efforts to improve efficiency. Within the recent recommendations, one can identify a growing emphasis on its link to energy transition. On the other hand, the rights-based approach and energy justice are rarely referred to.

As noted previously, the UN and the EU are the primary actors in discussions surrounding energy poverty in the international context, and efforts to mitigate the issue are primarily taking place in Europe. Therefore, one can argue that the UN and the EU play a central role in energy poverty in terms of policy frameworks, while Europe is a key region implementing practical policies and projects aimed at mitigating energy poverty. In this respect, a comparison between these two prominent actors can provide insight into how distinct approaches to the issue lead to different mitigation efforts for energy poverty.

Table 3. Comparison of the Approaches of the EU and the UN

Conceptualization of Energy Poverty (EP)	Approach of the EU	Approach of the UN
Scope	Regional (EU Member States)	Global (Particularly developing nations)
Primary Driver	Achieving goals related to climate change and energy transition	SDG 7
Focus	Energy efficiency, household conditions, and consumer protection	Universal access to modern electricity and clean cooking
Conceptualization	Socio-economic and technical issue	Multidimensional development issue

As can be seen from Table 3, which was created through the examination of the EU's and UN's policy frameworks and initiatives, they have different approaches to energy poverty, regarding the conceptualization of the issue and the primary drivers of the efforts. In this context, it can be proposed that it might be useful to identify the differences between the two actors' approaches, even though these differences in approaches mainly arise from one pursuing regional objectives while the other operates with global goals. Nonetheless, it is also possible to propose that a comparative analysis can be useful, as both significantly shape the narratives and strategies surrounding the mitigation of the issue. After acknowledging this fact, it is possible to argue that each organization defines the issue of energy poverty in its own way, which leads to distinct strategies for addressing it. The EU's approach is

mainly related to the concepts of energy transition and climate neutrality. Hence, its focus is on improving energy efficiency and concentrating on decarbonization policies. On the other hand, the UN prioritizes global development goals. It mostly underlines universal access to modern energy services as well as poverty reduction and human development. Looking at these priorities demonstrates different definitions of the problem and different ways to address it. Both organizations have key roles. They shape the discourse and practices surrounding the issue. Although their contexts and scales differ, their combined efforts contribute to a broader understanding to the issue of energy poverty. Following the discussion on the issue in the international context, it is important to address the shortcomings of global efforts to combat energy poverty.

2.3.1. Shortcomings of International Efforts

Since the 1990s, international recognition of the issue has grown. As mentioned earlier, the UN and the EU have developed strategies to reduce energy poverty, but these international efforts have not been large or effective enough. IEA, UNDP, and UNIDO (2010) warn that if current trends continue, more people may lack access to modern energy services by 2030 than today. IEA's (2023) report confirms this concern. These reports demonstrate a deterioration of earlier progress. The reports also underscore the need for a change in direction. IEA et al.'s (2010) report indicates that addressing this challenge necessitates a global political commitment. While international organizations have been addressing the necessity of a strong global commitment, the academic literature has been addressing this necessity as well as the shortcomings of the international efforts.

In this context, Nussbaumer et al. (2012) argue that although international organizations have set goals for universal access to modern energy services, the achievement of these aims has been hampered by *limited data* and *insufficient action*. Nussbaumer et al. (2012) indicate that efforts towards the issue can have meaningful results if there are transformative changes. It is not sufficient to merely provide the energy needs of households directly; there have to be efforts to foster sustainable development. In this respect, efforts can lead to wider socio-economic growth.

Additionally, Nussbaumer et al. (2012) underline that *political commitment needs to be strong and specific, with definite actions and measurable goals.*

As previously mentioned, the UN has demonstrated a global commitment through the Sustainable Development Goals (SDGs) established in 2015. Most initiatives addressing energy poverty align themselves with SDG7, which focuses on improving access to energy while promoting renewable energy adoption and increasing overall energy efficiency (Duvic-Paoli, 2021). This goal has been recognized as a major milestone in global energy policy, highlighting essential elements for a sustainable energy future (Heffron et al., 2018). Also, Karlsson-Vinkhuyzen (2010) notes that these goals are particularly significant since, in previous years, governments were reluctant to collaborate on energy issues, making such international agreements difficult to achieve. Furthermore, achieving SDG1, the goal of ending poverty, is closely linked to fulfilling the targets of SDG7 (Addison & Roe, 2024).

As mentioned in the previous paragraph, although there are international goals set in mitigation the issue, the results of these efforts reveal that they remain insufficient. It is possible to see the shortcoming with the help of monitoring mechanisms regarding the progress of SDGs. In this context, there have been insufficiencies regarding the implementation of this goal. To begin with, the goal remains vague (Zaidan & Ibrahim, 2024) and inadequate (IEA et al., 2024) to mitigate the issue. The inadequacy is demonstrated by IEA et al.'s (2024) reports, which is the main body that tracks the progression of the goal. The aforementioned report indicates that current global trajectories are not aligned with the achievement of SDG7 (IEA et al., 2024). Along with the IEA's reports, Min et al. (2024) use satellite images in developing countries to analyze light patterns to identify energy poverty. This approach showed that more than 657 million people in Sub-Saharan Africa are affected by energy poverty. Also, the study identifies that 447 million people have access to electricity but do not utilize it effectively (Min et al., 2024). These numbers indicate that global efforts are insufficient for their own (Zaidan & Ibrahim, 2024).

In addition to the *vagueness and inadequacy* of SDG7, it also *lacks a legally binding force*. Duvic-Paoli (2021) argues that although including SDG7 in the 2030 Agenda

is an important step toward global energy governance, the goal mostly remains a hopeful aim because it does not have a legal force. Furthermore, Duvic-Paoli (2021) argues that the SDG7's commitment may serve as a starting point for the formal recognition of the "right to energy". Duvic-Paoli (2021) discusses that efforts toward achieving this goal could lay the groundwork for a campaign designed to mobilize states around the acknowledgement of this right, drawing parallels to the pathway followed in the recognition of the right to water and sanitation by the UNGA.

Also, Zaidan and Ibrahim (2024) argue that these goals are not effective in practice *without strong national oversight*. They underline that without the states' commitment to global efforts, it would not be possible to have progress. Thus, improving national supervisory mechanisms is essential to ensure that global commitments result in real actions at the local level, ultimately achieving a fairer distribution of energy resources. Furthermore, there needs to be mechanisms to oversee the policies within the state. Zaidan and Ibrahim (2024) also point out the necessity of supervisory mechanisms within a country to monitor efforts.

Lastly, a significant shortcoming regarding the alleviation efforts of energy poverty can be addressed, which is energy subsidies. Both international and national efforts have been made to address the challenge of high energy prices. To address this problem, many countries have introduced *price subsidies or special social tariffs* for energy. However, the OECD (2025) warns that these subsidies are only short-term solutions. OECD (2025) also indicates that these *temporary solutions* could aggravate the problem because such solutions *postpone necessary long-term reforms.* Ürge-Vorsatz and Herrero (2012) argue that artificially low energy prices send misleading economic signals, resulting in capital investments that fall short of optimal energy efficiency levels, contrary to principles of economic rationality. In addition to hindering efficiency improvements, subsidies often disproportionately benefit wealthier households rather than those most in need. For instance, Sdralevich et al. (2014) found that in Jordan, 40% of energy subsidies went to the wealthiest 20% of households. Similarly, Cooke et al. (2016) reported that in Ghana, 78% of fuel subsidy benefits were received by the richest households. These studies show that subsidies do not help energy poor households. Consequently, subsidies represent an unsustainable approach for achieving long-term mitigation of energy poverty.

To conclude, a number of international organizations, including the UN and the EU have been adopting an approach to diminish energy poverty by implementing a framework focused on energy efficiency and energy transition. The landscape for these discussions is dominated by these two spheres. However, there is a need to discuss energy poverty in relation to energy affordability and energy justice. There is a need to prioritize affordability over efficiency and to place energy justice at the center of the discussions. Also, the states' role, which is mostly omitted, needs to be included within the discussions of energy poverty. At this juncture, the thesis proceeds with an examination of the political economy of energy poverty.

In a nutshell, Table 4 summarizes the main findings regarding the shortcomings of international efforts.

Table 4. The Shortcomings of International Efforts to Mitigate Energy Poverty

Shortcoming	Additional Information
Insufficient scale & impact	Efforts have not been large or effective enough; progress may worsen by 2030 without change.
Vague, non-binding goals	SDG7 and similar targets lack clarity and legal force, reducing practical effectiveness.
Limited data & monitoring	Insufficient quality data and indicators hinder accurate measurement and targeted action.
Weak political commitment	Lack of strong, specific political will and national oversight delays implementation and progress.
Over-reliance on subsidies	Subsidies offer short-term relief but mostly benefit wealthy households and delay long-term reform.
Efficiency over affordability	Focus is on technical energy efficiency rather than addressing access affordability and energy justice.
Underemphasis on state role	States' crucial role in enforcement and policy-making is often omitted from international frameworks.
Ignoring regional disparities	Global efforts overlook geographic variations, especially persistent energy poverty in developing regions.

2.4. The Political Economy of Energy Poverty

Energy poverty's negative impacts have been leading to the development of policies aimed at assessing the issue. It is possible to identify that international, national, and local efforts have resulted in some progress in terms of mitigating the issue. These

progressions can be observed in domestic legal cases such as Urgenda Foundation v. State of the Netherlands (2019) and Juliana v. United States (2;20). However, in general, the mitigation efforts have produced limited results (Zaidan & Ibrahim, 2024). It is possible to argue that these efforts have been effective in terms of raising awareness about the issue. However, the progression remains insufficient, as it can be seen from the progression of SDG7 as well. In this context, one can argue that an obstacle to meaningful progress is the insufficient understanding of the root causes of the issue. Hence, there needs to be an examination which includes structural analysis, assessment of stakeholders' interests, and power dynamics regarding energy sectors, which have an impact upon energy poverty.

The issue is deeply linked to broader political and structural inequalities, aspects that are often neglected in international efforts (Sovacool et al., 2016). In recent years, there has been a growing recognition that it is important to deal with the root systemic causes rather than only applying technical solutions to deal with this problem (Sovacool et al., 2016; Bouzarovski, 2014; IEA, UNDP, & UNIDO, 2010). For this reason, tackling energy poverty calls for a thorough understanding of political and economic issues. Within the framework, there will be an examination of how political actors, such as states, institutions, and social movements, interact with and influence economic systems (Veseth, 2025).

In this respect, Aklin et al. (2018) provide one of the prominent studies which offer a political economy lens, with the public sector playing a leading and enabling role within broader systemic reforms and governance frameworks. Aklin et al. (2018) contend that energy poverty is fundamentally a political economy problem by arguing that energy poverty in developing nations is driven more by political elements, such as government priorities, institutional capacity, and levels of local accountability, rather than by technical or economic limitations. They discuss that when governments have strong political or economic reasons to tackle the issue, they are more likely to create effective policies. However, how successful these policies are depending on whether the energy sector has a strong institutional capacity and whether there are systems in place to hold officials accountable at the local level (Aklin et al., 2018).

Table 5. Overview of the Key Factors of Political Economic Approach to Energy Poverty

Key Factors to Evaluate	Relevant Information	Key Points
Structural Factors	Socioeconomic and structural drivers that lead or perpetuate energy poverty (Zang & Chandio, 2021; Bouzarovski & Petrova, 2015; Tirado Herrero & Ürge-Vorsatz, 2012; Healy, 2003)	- Low household income - Energy efficiency - Energy affordability - Infrastructure inadequacies
Energy Market Liberalization	Transition from state-led energy provision to competitive, market-based systems (Bouzarovski & Petrova, 2015)	- Price volatility and exposure to global markets - Prioritization of profitability over equity - Prioritization of efficiency over affordability
Role of the State	Influence of the state and public institutions in shaping energy access and supporting vulnerable groups. (Bouzarovski & Petrova, 2015; Middlemiss & Gillard, 2015)	- Policy design and regulation - Price control and subsidies - Public infrastructure investment - Social protection (tariffs, disconnection bans)
Power Relations & Interests of the Actors	Interplay of different actors (international actors, state, civil society, households, and energy market) (Moldovan, N. & Pons-Vignon, 2025)	- International organizations domination of the discussions - Utility companies prioritize profit - Households' limited influence - Civil society groups call for energy justice and the right to energy

In this context, to effectively address the challenges related to the issue, one can argue that the political economy of energy poverty must be included in the discussions to examine the complex relationships between political authority, economic structures, and energy resources. Tanner and Allouche (2011) define political economy as the processes through which ideas, power, and resources are conceptualized, negotiated, and implemented by different groups (Tanner & Allouche, 2011). This perspective expands on conventional understandings by emphasizing the influence of power dynamics and conflicting interests at the local, national, and global scales (Tanner & Allouche, 2011). Specifically, a political economic approach to energy poverty needs to examine how power relations, institutional settings, and political and economic motivations influence the processes of energy generation, distribution, and use, going beyond purely economic or technical factors. To analyze the political economic perspective of energy poverty, it is necessary to examine the structural factors that lead to energy poverty among households and perpetuate the problem. On these grounds, this part of the sub-chapter is composed of the explananda of political economy of energy poverty,

which are structural factors of energy poverty, energy market liberalization, the role of the state, and the power relations and interests of the actors related to the issue.

Prior to discussing structural factors, the initial step is to identify the key actors which influence the issue of energy poverty. A closer look at these actors can provide a ground for examining the issue. There are multiple actors, each with their own priorities and goals. These actors also have different degrees of influence on the issue.

Table 6. The Key Actors in Energy Poverty Debates

Actor	Main Focus	Addressing Energy Poverty
UN	Sustainable development, climate action	Frames energy access as essential for achieving SDGs, Emphasizes social inclusion and environmental sustainability.
EU	Effieciency measures, vulnerable consumers, just transition	Defines energy poverty in terms of consumer protection; linked to climate change and energy transition policies.
Nation States	Social policies, subsidies	Approach shaped by domestic contexts, Focus on economic development.
NGOs / Civil Society	Advocacy, grassroots action	Frame energy poverty as a social justice and climate justice issue
Private Sector	Market-based solutions	See energy poverty as a market opportunity, Prioritize efficiency technologies.

As discussed previously in detail in the context of the UN and EU, international organizations play a significant role in shaping discussions surrounding the issue. As proposed previously as well, this thesis proposes that international organizations dominate the scene. In this respect, although discussions on energy poverty are often dominated by non-state actors, starting with the international organizations, the state occupies a central role in addressing the issue. The state is responsible for governance and policy development related to access and affordability aspects. As

the principal actor, it implements policies to mitigate the issue. Aklin et al. (2018) underline the states' responsibility to devise policies that provide them with the necessary tools to address the issue. Aklin et al. (2018) also underline the significance of national mechanisms since it is possible to provide equitable distribution of energy benefits and burdens at the national level. Therefore, there needs to be carefully designed policies which target both supply-side and demand-side factors. While infrastructure investment is needed in the supply-side, support mechanisms for energy-poor households are needed in terms of demand-side factors. The state is also responsible for conveying global commitments into actionable measures at the local level since the nature and manifestation of the issue differ among countries. Varo et al. (2022) indicate that the responsibility to tackle the issue is on the state. This responsibility stems from the recognition that energy poverty mostly stems from structural and systemic factors (Varo et al., 2022). However, Varo et al. (2022) also argue that despite this central role, the public sector is often overlooked. In this respect, one can argue that developing a clear state-led plan in official policies is an important step toward addressing the problem. The EU further underscores the states' role by mandating Member States to integrate energy poverty mitigation measures in their national energy and climate plans (CAN Europe, 2021).

On the other hand, emphasizing the states' role in energy poverty discussions prevents the danger of the private sphere dominating this realm. Bakker (2007) points out the issue that the language of "rights" by private companies provides us with a constrained framework by stating: *"the adoption of human rights discourse by private companies indicates its limitations as an anti-privatization strategy… 'rights talk' offers us an unimaginative language for thinking about new community economies."* (Bakker, 2007: 447). In this regard, as Bakker (2007) points out, the rights talk adopted by private companies risks limiting the scope of the right to energy. To prevent this monopolization, governments should be assigned clear responsibilities. This can be achieved by formally recognizing the right to energy as a human right and framing it as a positive right that obligates state action. The right to energy is a concept that recognizes access to and use of energy services as an essential human right. It surpasses the view of energy as merely a commodity.

Civil society also has a significant role in the discourse surrounding this issue. In fact, one can argue that it was civil society that originally initiated these discussions. The efforts by the UK government to mitigate energy poverty have been a result of grassroots demands. In the 1970s, households were impacted negatively by the oil crisis, and the demand was raised by civil society organizations. Civil society organizations, "Friends of the Earth" in particular, along with labor unions, were central to the early civil society demands for mitigation of energy poverty in the 1970s UK. These demands also led to the prevalence of the idea of energy as a justice concern. Moreover, the initial grassroots movements played a key role in broadening the horizon for the issue. These movements altered the understanding of the issue by addressing it as a matter of justice. They give voice to the arguments that energy is not just a mere commodity. They claim it as a fundamental right due to its connection to human well-being. This reframing has incorporated human rights claims into energy discussions. With this conceptualization, it is possible to laying the ground of "energy justice" (Bouzarovski & Simcock, 2017; Sovacool et al., 2017). In this respect, Jenkins et al. (2018) argue that this view has shaped international policies by encouraging strategies that focus on reducing social and economic inequalities. NGOs continue to play a significant role in supporting these ideas and objectives. One of the most prominent cases which involves NGOs is the advocacy for a ban on energy disconnections. A prominent example is their involvement in revising the EU's electricity market design (2023/0077(COD)). Various European NGOs called for a ban on energy disconnections. Various European NGOs advocated for a ban on electricity disconnections. Their efforts have shaped the reform measures which are now incorporated in the EU's electricity market framework.

The aforementioned reforms show how civil society influences policymaking by demanding social justice. In this respect, it is possible to argue that NGOs' advocacy for banning energy disconnections helped energy-poor households maintain access to electricity. For instance, "The Alliance against Energy Poverty", based in Catalonia, Spain, has been demanding stopping the disconnecting of electricity, particularly for people who cannot afford to pay their bills. Their efforts contributed to the efforts to mitigate energy poverty since low-income households did not face electricity cut-offs

in the region. This example demonstrates the role of NGOs in linking grassroots justice demands with policy. It shows that energy policy involves more than just economic or technical considerations.

Households are one of the primary stakeholders in discussions of energy poverty, and they are directly impacted by the actions of other stakeholders. They experience firsthand the inability to access or afford adequate energy services necessary for basic living standards. Since energy poverty affects the well-being of households, they are at the core of this issue. Their experiences provide an understanding of the complex aspects of the issue. Through the lens of the household, it can be possible to see that the issue encompasses social, economic, and psychological factors (Sovacool et al., 2017; Bouzarovski & Petrova, 2015; Walker & Day, 2012). In this regard, it may be possible to understand that what has been missed by approaches focusing solely on technical or economic aspects. However, despite their centrality, it is possible to indicate that they are the least influential stakeholder within the discussions.

In general, the term “consumer” is used in energy-related issues to refer to a household as the main energy user. The UN’s frameworks and the EU’s energy policies and legislation generally use the term “energy consumers”. Specifically, the EU’s energy legislation employs this terminology to frame the protections and responsibilities associated with energy use in the internal energy market. As an instance, the EU’s Directive 2009/72/EC emphasizes the necessity for national plans to combat energy poverty and acknowledges the responsibility of member states to ensure a sufficient energy supply for vulnerable “consumers” (Directive 2009/72/EC, Article 3.8). Hence, Article 3.8 emphasizes the Member States’ responsibility in safeguarding these groups. However, it is important to note that while the Directive uses the term “consumers” rather than explicitly naming “citizens,” “individuals,” or “households”. In this regard, it is possible to argue that this choice of language signals a particular framing of energy users primarily as market participants rather than as social subjects with rights and vulnerabilities embedded within broader socio-economic contexts. Although the Directive aims to improve the conditions of energy-poor households, referring to affected households simply as “consumers” carries

several notable implications. Firstly, the label of "consumer" means energy poor households are regarded as market actors and they are evaluated in terms of market engagement. When attention is placed only on the role in the market, the focus becomes market-based solutions like subsidies. This way of thinking overlooks the deeper issues of well-being as well as rights. Secondly, seeing households solely as consumers can also result in their experiences being underestimated, which makes it harder to respond to their specific social and economic challenges. Finally, it risks understating the critical need for thorough government action and policies that extend beyond market mechanisms to address the issue.

To conclude, by examining the actors' role through the lens of the political economy of energy poverty, one can argue that there is a dominance of non-governmental actors surrounding the discussions of the issue, even though the state is the main actor to address it. Also, households are often overlooked within the discussions, even though they face the cold face of the problem, while coping with the cold stemming from their energy deprivation. Moreover, energy-deprived individuals or households are referred to as "consumers", which evaluates them merely by their role in the market rather than acknowledging their social and economic vulnerabilities. In light of these discussions, it is possible to propose that recognizing these challenges is crucial in rebalancing stakeholder dynamics.

2.4.1. Systemic Factors

As noted previously, with the 2010s onwards, there was a shift towards understanding the systemic problems to address the issue of energy poverty. Discussions concerning the issue have expanded to incorporate the roots of the problem by examining the structural factors which have an impact on the issue. It has also acknowledged that identifying systemic drivers is necessary to address the fundamental causes of this issue. These drivers encompass institutional influences, political and economic dynamics, infrastructure, housing configurations, household income distribution, and variations in the accessibility of utility services (Bouzarovski & Petrova, 2015). Sovacool (2012) underlines the systemic obstacles that need to be overcome to effectively mitigate the issue by identifying energy

poverty as an issue which is shaped by technical and social systems and power structures which manage energy supply and distribution. Sovacool (2012) also argues that a range of political and economic factors complicates efforts to alleviate energy poverty. These factors include private sector entities focused on profit, government officials with conflicting priorities, development donors with hidden agendas, and persistent socio-technical barriers.

Parallel to Sovacool's arguments, Petrova (2018) discusses that common views on energy poverty concentrate mainly on the household level, neglecting the wider systemic and institutional factors which cause perpetuation of energy vulnerability. Petrova's (2018) study underscores the significance of political and institutional acknowledgement in addressing energy poverty. Also, Simcock, Frankowski, and Bouzarovski (2021) contend that the persistence of energy poverty is largely sustained due to the lack of political and institutional recognition. In line with Petrova (2018) and Simcock et al. (2021) 's arguments, EPSU, a trade union federation in Europe, underlines the root causes of energy poverty by identifying it as a combination of structural factors, which include income poverty and inequality, unfair energy prices and poor quality and inefficient housing conditions (EPSU, 2022). As the initial step towards the analysis of roots of energy poverty, energy market liberalization and its impact upon energy poverty are discussed in the following section.

Within the context of systemic factors of energy poverty is energy market liberalization. In modern capitalist countries, energy has become a commodity. Private companies are mainly responsible for its extraction, processing, and distribution. This shift is shown by how natural resources are licensed to private companies and how energy markets have been privatized (Huhta, 2021; Jiglau et al., 2023). As a result, a power dynamic has emerged whereby households have become significantly dependent on the market to secure access to energy. By the 1980s, as neoliberal ideas became prevalent globally, a new approach to providing utilities emerged, emphasizing increased competition and reduced government intervention. This approach was adopted especially in the electricity sector. The approach was promoted on the basis that it would lead to lower prices for consumers. However, the

result was the opposite of the expectation. Chester and Morris (2012) indicate that a supposed advantage of restructuring the electricity sector was to reduce consumer prices. However, this was not the case. They argue that since the changes, households have not seen lower electricity bills; instead, they have faced increases much greater than general price and wage changes, especially since the 2000s. This reveals that liberalization has not delivered the promised benefits of lower consumer prices. Instead, it has intensified affordability issues for many households.

A body of literature suggests that the liberalization of the electricity market has exacerbated the issue of household energy poverty, disproportionately affecting low-income households. The low-income households are particularly adversely affected as they are forced to allocate an increasing share of their income to energy expenses (Chester & Morris, 2012). Chester and Morris (2012) indicate that electricity prices more than doubled in certain European countries, and in New South Wales, Australia, they increased by 80% from 2007 to 2012. Chester and Morris (2012) argue that this form of energy poverty is a direct result of market-driven reforms within the electricity sector. Additionally, EPSU (1999) emphasized the potential exacerbation of fuel poverty resulting from the liberalization of the energy sector, asserting that obligations defined by the World Health Organization for the electricity sector should ensure that citizens have access to electricity sufficient for maintaining adequate warmth, a reliable and uninterrupted supply, and affordable prices. It is crucial to prevent fuel poverty, and the Commission should establish a European Public Service Charter to monitor these developments.

The neoliberal turn in the 1970s changed the way economic and political systems were organized. Neoliberalism focused on limiting state involvement and privatizing industries (Klein, 2008). This change also altered how energy is managed. Fearn (2023) argues that although market-oriented reforms aimed to improve efficiency as well as reduce costs, these reforms often caused energy prices to rise. Also, protections for the energy poor households also weaken. These result in negative impact on households. As a result, this change in approach made energy poverty worse. The retreat of the state from direct energy provision meant that affordability and universal access became subject to market forces rather than social welfare

considerations. Furthermore, internal tensions within a neoliberal policy paradigm have led to the energy system being embedded in crisis (Fearn, 2023).

2.4.2. Structural Factors

As noted previously, international efforts for energy poverty, especially the EU's policies, are generally concentrated upon energy efficiency measures and target housing improvements. The European Commission policy documents often point out the structural factors, such as the energy efficiency of housing, the qualities of dwellings, and socio-economic disparities, as key to comprehending and tackling energy poverty. These reports emphasize that this issue is not just about how much money a household earns. It is deeply connected to the structural problems. Within the context of structural problems, one can identify the quality of the buildings as one of them addressed by the EU. For example, the EU's Revised Energy Efficiency Directive (EU/2023/1791) focuses on mitigating the issue by improving the energy efficiency of buildings (European Commission, 2023).

Table 7. Main Structural Factor of Energy Poverty

Household Income
Quality of Housing and Housing Composition
Energy Efficiency
Energy Affordability
Access to Modern Energy Infrastructure

Regarding the structural factors of energy poverty, one can begin with household income, as the primary component of the issue. As Hihetah et al. (2024) indicate, a significant portion of the studies regarding the issue focus primarily on households based on income levels. In this regard, Bouzarovski & Petrova (2015) identify income as a central factor of energy poverty. Also, Wang et al. (2024) present empirical data from China showing that rising income inequality contributes to greater household energy poverty, while also demonstrating that an increase in overall household income helps alleviate energy poverty. Along with the studies regarding the issue, some international actors identify income level as the main determinant of the issue. EPAH (2024) identifies low income as a main cause of

household energy poverty. In light of the literature and international actors' reports, the link between household income and energy poverty is widely recognized both in the literature and by the international actors. Acknowledgement that the main factor of household energy poverty is household income is significant since the issue is predominantly a financial challenge tied to low income. On the other hand, the issue is more nuanced than household income. Other important structural factors can be named as the quality of housing, the availability of energy infrastructure, and the size of the household. Hihetah et al. (2024) argue that focusing solely on income as a measure of energy poverty is not sufficient to comprehend the issue's complexity. They point out that even households with energy access can face struggles due to high prices, poor housing, or specific family needs, and that relying only on income misses those who cut back on essential energy use, risking their health, just to afford it.

Along with the household income, housing condition is one of the significant parts of the structural factors of the issue. Housing conditions include low energy efficiency, inadequate insulation, old or leaky buildings, and dwelling characteristics that raise energy consumption and costs. Bouzarovski and Petrova (2015) identify housing and infrastructural quality as key structural factors by arguing that household energy inefficiencies significantly increase energy demand and cost.

After discussing the systemic and structural factors of the issue, it is noteworthy to discuss the intersection of these factors, which are energy affordability and energy efficiency.

Energy affordability is mainly a governance concern. Addressing the needs of energy poor households is a key policy priority (Bazilian et al., 2014). It is both a systemic and structural factor since systemic factors are related to market dynamics. Prices are basically determined by the market dynamics and policies. How energy markets are regulated and priced affects affordability. How these systemic elements operate directly influences how affordable energy is for households. Also, energy affordability is directly related to the household income, which can be regarded as both a systemic and a structural factor. In this respect, as Bouzarovski and Petrova

(2015) note, one can argue that addressing energy affordability necessitates a holistic approach, which takes into account market mechanisms, policies, as well as socioeconomic inequalities.

In the context of energy affordability, Bartl (2010) examines the European Commission's strategies to address energy poverty and identifies a contradiction regarding the strategies. This dual strategy stem from promoting competition in the energy sector while also trying to protect vulnerable households. He highlights a key challenge, which is the contradiction between market liberalization and social policies. While market liberalization emphasizes competition and efficiency, social policies aim at supporting energy-poor households. In this context, competition in the energy market does not necessarily have a positive impact on energy prices. In this context, Bouzarovski and Petrova (2015) indicate that energy markets may lead to greater price fluctuations. These fluctuations tend to impact vulnerable groups more heavily. A market-oriented approach does not support household needs. In this respect, it is possible to argue that the aforementioned contradiction creates a policy gap that diminishes the impact of affordability measures. Bartl (2010) emphasizes the need for clear regulatory frameworks to ensure energy remains affordable. In this framework, one can argue that examining energy affordability unveils the contradiction between two policy goals, which are market liberalization and the protection of energy-poor households. As Bartl (2020) identifies, competition within the market does not necessarily guarantee affordability; therefore, it remains insufficient to protect energy-poor households, which is the main goal of energy poverty efforts. In this respect, one can argue that a holistic approach to the affordability issue can reveal a contradiction within the efforts of energy poverty.

Similar to affordability, one can argue that energy efficiency is also a systemic and structural issue at the same time. Energy efficiency depends not only on the physical features of homes and appliances, which are accounted as structural factors, but also on policies, incentives, and programs that promote improvements and set efficiency standards, which are systemic factors.

In the context of energy efficiency, one can see that it has a dominance within the discussions surrounding the issue. As indicated by Chipango (2021), the discourse

surrounding energy poverty often narrowly frames it as a technical problem, which can be solved through efficiency improvements. This prevailing perspective tends to restrict discussions to efficiency solutions. Some prominent policy plans regard improving energy efficiency as a main way to alleviate the issue. One of the prominent examples of this approach is clear in the EU's updated Energy Efficiency Directive and the 2023 Commission Recommendation on energy poverty. Both the Directive and Commission Recommendation evaluate efficiency efforts as an important way to address the issue. Notably, the updated Energy Efficiency Directive indicate that it "emphasizes the 'energy efficiency first' principle and obliges Member States to prioritize vulnerable citizens and social housing within energy savings measures (European Commission, 2023). Also, a study by Stojilovska et al. (2022) supports this idea. The study shows that both researchers and policymakers often focus on energy efficiency (Stojilovska et al., 2022).

Although progress in energy efficiency helps to lower energy consumption, it is not able to adequately address the roots of the issue. Thereby, efficiency-focused solutions provide insufficient temporary solutions (Legendre & Ricci, 2015; Bouzarovski & Tirado Herrero, 2015). Also, these efficiency-focused approaches frequently neglect the underlying socio-economic factors, such as low household income, elevated energy costs, and systemic inequalities, that are essential for comprehensively addressing energy poverty (Bouzarovski & Simcock, 2017; Petrova, 2018).

Framing energy poverty as a technical issue implies that it can be alleviated through efficiency measures. However, Chipango (2021) argues that this viewpoint dominates the discourse, and further argues that reducing the issue merely to efficiency confines the discussions. As discussed before, the EU's policies prioritize efficiency as a fundamental approach to mitigating the issue. For instance, the EU Commission, Council, and Parliament reached a provisional agreement to reform the Energy Efficiency Directive in March 2023. The Directive identifies energy efficiency as a key strategy for alleviating energy poverty (Directive 2021/0203/COD). This Directive provides an example which reveals the EU's approach to energy poverty. It identifies the issue as mainly an efficiency problem.

Also, Stojilovska et al. (2022) conducted a study revealing that the literature and policy initiatives addressing the energy poverty related issues predominantly emphasize efficiency aspect of the issue.

In this respect, one can argue that this issue cannot be comprehensively addressed without taking into account systemic and structural factors. Even if energy efficiency is maximized, the problem will still continue to affect low-income households that encounter high energy prices. Overemphasis on efficiency risks overlooks the fundamental causes of energy poverty. Macroeconomic factors, infrastructural problems and high energy problems have to be addressed to reach a meaningful discussion for how to tackle the problem. Consequently, prioritizing efficiency without simultaneously addressing structural issues and affordability concerns may result in an inadequate response that fails to tackle the broader socio-economic dimensions of energy poverty.

In recent climate change discussions, the literature and international efforts focus mainly on improving efficiency to tackle the problem. However, emissions from households make up a small part of climate change compared to those from private companies. In this regard, Oldfield's (2022) study provides significant information related to this argument. Oldfield (2022) shows that a few companies are responsible for most of the world's industrial carbon emissions. The study finds that since 1988, just 100 companies have produced 71% of global greenhouse gas emissions. On the other hand, household emissions make up a much smaller portion. This fact challenges the common focus on household energy efficiency as the main way to fight climate change. In light of this information, it is possible to argue that it is more important to target emissions from corporations (Oldfield, 2022). Due to this misleading focus, the literature inadequately addresses the structural barriers that hinder efforts to alleviate the issue.

2.4.3. Role of State

As proposed previously, international organizations have a dominant role within the discussions surrounding energy poverty by defining terms and setting agendas. In

this respect, it is possible to identify that they determine priorities for alleviation strategies. On the other hand, states have the authority and ability to directly influence outcomes for their citizens. Despite its significance within this issue, there is a limited examination of state function within the context of this issue. One can argue that the role of the state is often overlooked largely because energy poverty had been conceptualized mainly as a technical problem instead of a wider social and political concern. In recent years, international organizations have been emphasizing that strong state policies, regulatory systems and institutional structures are essential for the effective alleviation efforts for energy poverty (IEA, 2021; UN, 2015). Also, in recent studies, there has been a growing recognition of the states' role in mitigation efforts. States are recognized as central actors in the discourse surrounding energy poverty, particularly because market mechanisms alone are insufficient to achieve meaningful results. There is growing recognition that energy goes beyond being merely an economic commodity. It is fundamental to the well-being of households, and there has been growing recognition of the issue as a justice concern. Hence, this household well-being-centered approach requires active state involvement in the issue.

Recent studies have increasingly attributed a central role to state capacity in efforts to alleviate the issue (Agnoung Amang et al., 2025; Nguyen & Su, 2022). State capacity can be defined as a state's competence to enforce the law, collect taxes, and provide public services (Besley & Persson, 2010). Evans (1995) underlines the significance of that public institutions in terms of mitigation efforts. Evans (1995) contends that the relationship between the state and society play an important role in carrying out development policies. A strong state can regulate the energy sector. It also obtains funding for energy projects. Also, Agnoung Amang et al. (2025) 's study provides an examination of the relationship between state capacity and energy poverty in developing countries and argues that stronger legal and financial state capacity has a positive impact on alleviation efforts. In light of their findings, they highlight the importance of having a stable political and institutional framework to enable lasting public efforts to mitigate the issue.

In relation to state capacity, the role of institutions and governance have significant roles within energy provision to households. North (1990) argues that institutions are

essential because they establish the "rules of the game." According to North's (1990), a country with strong institutions can regulate the market to support energy-poor households. It can also coordinate investments to support those who are in most need. Drawing from the arguments of the role of institutions, one can argue that it is essential to strengthen institutions and accountability systems to have effective mitigation efforts.

Also, Nguyen and Su's (2022) study draws attention to the strength of "institutional quality", by arguing that the success of public spending within the efforts to mitigate the issue is highly reliant on the strength of institutional frameworks. Nguyen and Su (2022) propose that strong institutions improve the effectiveness of public funds, making sure that investments lead to increased availability of electricity as well as cleaner cooking options. Also, they draw attention to the role of governance with respect to access to electricity. They argue that ineffective governance, which leads to mismanagement of resources or corruption, has an increasing impact on energy disparities. In line with this argument, Ahlborg et al.'s (2015) study examines the provision of electricity in African countries and argue that the quality of institutions significantly contributes to the provision of electricity to households in Africa. In this context, these studies propose a relationship between good governance and energy poverty mitigation efforts.

In this respect, it is possible to argue that the state is responsible for focusing on household well-being and dignity rather than just following market-driven alleviation efforts, including efficiency. It provides a framework which prioritize the well-being of the citizens instead of regarding them merely as consumers. Also, a state-centric approach prioritizes citizens' well-being. Through this framework, it is possible to identify energy as a right rather than solely a market commodity. In this context, it can be argued that a state-centric approach to energy poverty also provides a shift in focus from efficiency and a market-centered approach to the energy-poor households to affordability and a rights-based approach.

2.4.4. Main findings of the critical political economic approach

The role of the state surrounding the discussions of energy poverty is multifaced, and the relationship between the state and capital plays a central role in the shaping of

energy policies. The persistence of the issue reflects the deep entanglement of state and market interests. The issue is often conceptualized primarily as a technical challenge or an issue of efficiency, a perspective that aligns with capital's pursuit of profitable solutions. However, this framing conceals the reality that the fundamental drivers of the issue lie in systemic and structural inequalities.

In light of the discussions on systemic and structural factors, as well as the role of the state regarding this issue, one can argue that both national and international agencies insufficiently address that the root causes of energy poverty are inherently structural and span a wide range of policy domains. When discussing this issue as a political one, it is important to emphasize the role of political recognition. The political recognition of the issue is significant since it provides a ground for public conversations. Its significance also stems from the fact that the political recognition holds states responsible for tackling the problem. This approach shifts the focus to a broader analysis that looks at how economic systems affect social well-being.

In addition to the state's role, a critical economic approach reveals the contradiction between affordability and efficiency efforts. Conceptualizing energy poverty as a political-economic issue underscores the significance of prioritizing affordability, instead of efficiency. Looking at the issue from the perspective of affordability means focusing on the financial barriers households face in accessing basic energy services. From this view, the issue is primarily a problem of low income and the inability to afford energy, rather than just an "efficiency" issue as it is often described by the private sector and international organizations. This approach must consider the monopolization of the private sector, positioning the issue as a public concern that merits comprehensive discourse.

A critical economic approach to the issue also reveals how energy-poor households are often regarded merely as consumers. As noted before, energy-poor households are frequently viewed just by how much energy they consume. This view reduces them to mere market actors. This limited perspective overlooks their well-being. From a political economy perspective, policies aimed at reducing energy poverty should focus more on making energy affordable rather than just improving

efficiency, especially if the goal is to enhance the well-being of affected households. Prioritizing household well-being also requires moving beyond treating households simply as consumers.

Taking into consideration of these arguments, in the context of energy poverty, states can be seen as the key actors, which surpasses a mere market-based approach to the issue. It is also the actor which can prevent the monopolization of discussions, which refers to households as consumers. Therefore, it is possible to argue that states can act as the guarantor of the well-being of households.

To sum up, as put forward in Chapter 2, it is possible to identify that although important progress has been achieved in conceptualizing, defining, and measuring the issue, the responses remain insufficient. Without evaluating the issue from a critical political economic perspective, current strategies leave the systemic roots of the issue largely unchallenged. With this in mind, it is useful to move forward by examining the main theoretical approaches to the issue, since the way the problem is framed directly shapes the solutions proposed.

CHAPTER 3

APPROACHES TO ENERGY POVERTY

In this chapter, there is an examination of theoretical approaches to energy poverty, which include the energy justice approach, the capability approach, practice theory, and the human rights approach. These approaches are examined with the aim of determining whether they provide a theoretical ground for the potential right to energy. After the examination of three approaches, there will be an examination of this potential right within the context of the human rights framework in the following chapter of the thesis.

3.1. Energy Justice

This part of the subchapter discusses energy poverty as a matter of justice concern, and further recognizing that a lasting resolution is unattainable without addressing broader justice issues. Understanding energy poverty as a matter of justice enables the thesis to look past just technical and economic aspects. Instead, it allows the focus to be on human dignity, fairness, and essential needs. It presents energy deprivation as a violation of basic human abilities and well-being, in line with current debates around social and economic rights. Also, one can argue that this approach can provide a ground for discussion, energy being not just a commodity, but a vital prerequisite for household well-being. Prior to elaboration of the term energy justice, it is helpful to begin with an understanding of the broader concept of justice briefly.

Rawls (1971) identifies justice as “the first virtue of social institutions” (p. 3). Hence, it is possible to see that this approach identifies justice as the guiding principle. In this framework, from Ralw’s (1971) stance, it is possible to argue that a just society

can only be achieved through equitable social, political, and economic frameworks. One can argue that this framework can be applicable to the justice issues within the energy poverty framework as well. Also, Hall (2013) points out the challenging nature of discussing universal conceptions of justice. It is a cumbersome issue since it necessitates "shared interpretations of the right or good" (Pelletier, 2010: 1887). It implies that the definition is inherently challenging (Hall, 2013). This challange has important consequences, especially in areas like energy justice.

Energy services significantly impact people's lives. They underpin claims to energy-related rights and driving political efforts to address inequalities in energy access, which can lead to health issues, mortality, and reduced life opportunities (Boardman, 2010; Wright, 2004). However, household energy poverty remains challenging to fully capture because it is experienced privately within homes. Nevertheless, it can be argued that the issue cannot be effectively resolved without recognizing it as a justice issue. Energy justice concerns often focus on ensuring that households have access to sufficient and affordable energy, which is essential for their well-being.

The term first appeared in academic literature in 2010 within an article entitled Energy Justice and Sustainable Development. However, the article primarily concentrated on sustainable development rather than energy justice as a distinct concept (Guruswamy, 2010). researchers started creating conceptual frameworks to elaborate on energy justice. Jenkins et al. (2014) identify three key dimensions, which are equitable distribution of energy resources, fair and inclusive decision-making processes, the recognition of the rights and needs of households. Sovacool and Dworkin (2015) provide a notable contribution to this discourse. They describe energy justice as a global energy system that fairly distributes both the advantages and disadvantages of energy services (Walker & Dworkin, 2015). They also underline the significance of fair and inclusive decision-making processes. Walker and Day (2012) also emphasized how justice frameworks are closely linked when dealing with energy, climate, and poverty issues. They recommend that future efforts to be based on these combined approaches. Also, Walker and Day (2012) draw on Amartya Sen's "The Idea of Justice" (2009) and John Rawls' "A Theory of Justice" (1972) to investigate energy-related issues such as fairness in distribution and

inequality. In light of these two approaches to justice, they examine the issue with respect to distributional, procedural and recognition aspects. Energy justice in literature is generally explored through these three key aspects (Heffron & McCauley, 2014; Walker & Day, 2012).

In the context of energy justice:
The first aspect, procedural justice, highlights the need for inclusive participation in energy-related decision-making, as well as ensuring fairness to address the issue (Todd & Zografos, 2005).

The second aspect, distributive justice, focuses on fairly sharing the benefits and burdens of energy production and consumption (Zaidan & Ibrahim, 2024). Recent studies view addressing the issue as a key concern of distributive justice (del Guayo et al., 2020). Also, distributive justice theorists argue that if physical security is a basic right, then the conditions required to guarantee it should also be recognized as rights as well. Some of these conditions are identified as food, shelter, and a healthy environment. Therefore, households should have a minimum access to energy services, or "subsistence rights," as proposed by Shue (1980), which includes the right to use modern energy sources.

The third aspect, **recognition justice**, points out social injustices in energy poverty as extending beyond resource distribution to include the failure to acknowledge energy vulnerable populations (Sovacool & Dworkin, 2015). Acknowledging and tackling the systemic barriers that lead to energy poverty requires advocating for changes in laws and institutional practices that disproportionately affect marginalized communities (Walker & Day, 2012).

In addition to these points, talks about energy equity and energy justice are especially important in procedural justice because they support inclusive decision-making that takes local needs into account (Sovacool & Dworkin, 2015). This means carrying out fair processes that include all stakeholders equally and without bias (Walker, 2009). In this regard, the role of the Ombudsman, as an independent public institution that has the power to control public administration within a certain framework, is

involved in the discussions of energy poverty as a case of procedural justice. Although this public institution has rarely been examined as an actor in the energy poverty literature, it has a capacity to identify underlying drivers of energy poverty at the institutional level. In this regard, Hesselman and Herrero (2020) argue that it can be used to detect legal breaches that impose injustice on households that are energy poor (Hesselman & Herrero, 2020). Also, Stojilovska (2023) explores the role of the Ombudsman in making and practicing policies related to energy poverty as a case of procedural energy justice.

While extensive research has utilized the aforementioned three approaches to analyze energy justice, there is a burgeoning body of literature that highlights the need for more in-depth analysis in this realm (Lee & Byrne, 2019; Jamal & Hales, 2016; Jenkins et al., 2014). Robina et al. (2022) argue that addressing energy poverty solely as a technical or economic issue, rather than a matter of justice, will hinder the development of sustainable solutions for two reasons. First, many private sector actors, NGOs, international organizations, and nation-states tend to perceive energy poverty as a private issue. Second, there is a common tendency to treat energy poverty as a "snapshot" problem. It refers to the problem of neglecting its broader dimensions as a justice issue. It also refers to the necessity to a transformation to address the issue. The issue is dynamic, varying with changes in household circumstances and differing significantly across geographic regions. As a result, current measurements often offer only a limited snapshot. They do not fully reflect the continuous and complex difficulties faced by vulnerable households (Robina et al., 2022).

Research in energy justice explores various justice theories to support better and more effective decisions regarding how energy is produced, distributed, and used (Sovacool and Dworkin, 2015). Looking at the issue from a justice perspective allows for influencing how energy resources are shared. Therefore, this thesis highlights the important role of justice in addressing the issue, based on ethical principles and anticipated practical results. The practical benefits framework includes effects on decision-making about the allocation of energy resources.

In light of the examination of literature on energy justice, as indicated by Baker et al. (2023), one can argue that this approach is to provide equity across all aspects of energy systems, markets, and operations at its core. In this respect, it is possible to note the notion of "equity" as a key element surrounding the discussions. The equity can be initiated by the just allocation of resources. Jenkins et al. (2016) indicate that discussions about energy justice specifically highlight the importance of fairly sharing both the benefits and burdens associated with energy production, distribution, and use (Jenkins et al., 2016). Also, Copeland (1980) argues that energy policies should ensure fair distribution of resources. Copeland's study highlights that unequal energy access causes broader social injustices and indicates that these injustices particularly harm marginalized groups. He argue that that both public and private sectors have a moral responsibility to ensure energy systems are accessible to all (Copeland, 1980). Building on this, Copeland criticizes energy policies driven by profit that overlook people's needs and instead supports policies that tackle these problems. This view matches a large body of research that explores the ethical side of energy policy and advocates for a fair and sustainable energy transition (Aung & Boyland, 2020; Copeland, 1980). Additionally, studies emphasizing energy equity highlight the importance of systemic reforms in energy systems to achieve justice goals (Molfetas & Rasool-Ayub, 2024).

Addressing energy poverty requires ethical attention to human dignity (Bethem et al., 2020; Sovacool, 2013). From this perspective, it is also possible to draw the moral responsibility of society. This perspective supports collective actions to ensure that everyone can access the essential energy services needed for their well-being. For instance, Stojilovska et al. (2023) demonstrate that social movements throughout Europe advocate for policies addressing structural inequalities and ensuring everyone has access to energy services. In this context, it can be argued that these collective actions emphasize the ethical importance of fostering social solidarity in the alleviation efforts of the issue.

On the other hand, the moral implications of energy-related decisions are often implicit and deserve careful consideration. Issues like pollution from energy use, its related health effects (Smith et al., 2012), environmental damage, resource shortages,

and energy insecurity (Cherp et al., 2012) have all been included in global discussions about energy justice. As a result, the conversation about energy justice involves broad and constantly developing ethical concerns. In light of the discussions of energy justice, the issue will be examined through the capabilities approach, which is constructed upon Amartya Sen and Martha Nussbaum's ideas. Before examination of this approach, one should discuss the possible shortcomings of the discussions of energy justice.

In this framework, it is possible to identify some challenges. A challenge seen in energy justice and other justice-based claims is that the language of universality and justice models, which assume equality among different groups, has often been used to maintain systemic exclusion. This has resulted in the marginalization of minority viewpoints and their justice demands (Zwarteveen & Boelens, 2014). Simultaneously, as highlighted by environmental justice scholarship, strength can still be drawn from the language and legal recognition provided by broader or global concepts of justice in efforts to combat inequality based on pluralistic justice norms (Temper & Del Bene, 2016). Also, restorative justice has been incorporated as an additional approach to energy justice in recent studies. The effectiveness of these instruments has been examined in the literature to determine whether they have produced the desired outcomes at the domestic level and whether they will yield positive results over time.

The thesis argues that an energy justice approach to the issue of energy poverty can be constructed upon a critical economic approach. As put forward in previous paragraphs, energy justice covers issues related to distribution and decision-making processes. The main concern of this approach is to ensure that burdens within production, distribution and consumption are fairly distributed. This approach aligns closely with political economy critiques that highlight economic and power relations driving energy poverty and injustice.

From this perspective, it can be concluded that the political economy approach shows how simply addressing the issue on the surface will not provide justice. It will not be possible without tackling deeper power structures. The energy justice approach

includes these criticisms by demonstrating how economic and power dynamics keep the issue ongoing. In this regard, one can argue that the energy justice approach, which is built upon a critical economic approach, calls for systemic change to achieve equity. Within this framework, one can also argue that justice approach to energy provides a ground for the conceptualization of the right to energy. Energy justice can be a tool to operationalize this right by focusing on who controls energy and how decisions are made. More importantly, it identifies who is most affected due to these power relations. In this regard, as Hernandez (2015) notes, the notion of energy justice inherently incorporates the right to energy, which is discussed within the following chapter of the thesis. While energy justice addresses various aspects of equity, the right to energy focuses the issues related to energy justice into a principle, which is that everyone has a fundamental right to energy.

Lastly, in the context of energy justice discussions, there have been discussions which call for an "ethical turn" (McHarg, 2020). One can trace this back to the discussions, which indicate that energy-related issues surpass mere technological and economic considerations. Sovacool et al. (2016) emphasize that decisions concerning energy systems involve aspects of political influence as well as ethical and moral questions related to justice and equity.

The ethical turn can provide a basis for the discussions of the potential right to energy. When energy-related issues, starting with energy poverty, are viewed through an ethical lens, one can argue that energy is more than a mere commodity. Through an ethical turn, one can argue that energy is essential for human dignity and well-being, which signals the potential energy poverty. In this respect, it is possible to argue that this perspective provides a solid moral foundation to claim the right to energy.

To sum up, understanding energy poverty as a justice issue highlights the need for comprehensive efforts to mitigate the issue. It emphasizes the importance of implementing actions that center upon needs of households while also tackling the root causes of poverty and inequality. After the examination of energy justice theory, the second approach to energy poverty is examined in the following section.

3.2. Capabilities Approach in Energy Poverty

In the early 1990s, Sen and Nussbaum created the capability approach. This framework provides a lens of deal with poverty and development issues by prioritizing concerns related to social justice issues (Sen, 1992; Nussbaum & Sen, 1993). From the 2010s onwards, this approach was integrated into the discussions of energy poverty as well (Butler, 2022; Chard, 2015; Day et al., 2016; Melin et al., 2021). Sen's framework introduces two key concepts that can provide a tool for understanding the lived experiences of household energy poverty. The first term, "functionings", refers to the states and activities that a person manages to achieve (Sen, 1993). Being healthy and nourished as well as having shelter are examples of functionings. The second term, "capabilities" refers to the genuine opportunities or freedoms a person possesses to realize various sets of functionings (Sen, 1993). Sen (1993) states that realizing functionings is necessary for well-being and dignity. This view points out that justice involves making sure individuals can achieve these capabilities. These requires acquiring the resources which are necessary to have for maintaining a dignified life (Nussbaum, 2006; Sen, 1993). In this framework, one can argue that energy needs also include this group of essential resources. In this respect, energy poverty can also be conceptualized as a deprivation of essential capabilities.

In this framework, one can also argue that Sen's (1993) concept of "development as freedom" can be applied to understand household energy poverty. This idea focuses on human freedoms rather than just economic measures when evaluating development. It argues that lack of energy reduces what households can do. Without enough energy, households cannot carry out important tasks that improve their quality of life, like cooking healthy food and staying warm. This shortage harms their well-being. According to this view, energy poverty prevents households from fully engaging in society. So, solving this problem means more than just supplying electricity or fuel; it also means helping households gain control over their own situation to deal with their struggle.

In addition to Sen and Nussbaum's (1993) arguments, Day et al. (2016) propose a distinction between basic and secondary capabilities. Day et al. (2016) argue that

secondary ones are concrete components, and these secondary ones enable the achievement of basic capabilities. While health and bodily integrity are examples of basic capabilities, the ability to keep a household warm, as well as broader access to energy services, are examples of secondary ones. Smith and Seward (2009) classify capabilities into primary and secondary types. Secondary capabilities are important conditions needed to achieve primary capabilities and show the updated ways capabilities work. From this view, energy poverty means not being able to develop these essential capabilities because of poor or insufficient access to energy, as explained by Sovacool and Dworkin (2014). Also, Bartiaux et al. (2021) identify energy poverty as a restriction of multiple capabilities, which negatively impact physical and mental well-being.

In this framework, identifying energy as indispensable for realizing broader human rights is consistent with the capability approach. According to this approach, without energy, households are deprived of the necessary means to achieve primary capabilities. Since these capabilities are central to well-being and dignity, the deprivation of them indicates human rights violations. By this approach, it is possible to establish a link between energy poverty and the violation of human rights. In this regard, it is possible to identify that this approach can provide a normative basis for integrating the right to energy within international and national policy frameworks. Therefore, one can argue that this approach supports a rights-based claim. In this respect, it is also possible to argue that energy is not merely a commodity but an enabler of human capabilities. Examination of energy in this light also indicates state responsibility. In this light, the issue is addressed not just as a technical or economic issue but as a matter of justice and human rights.

3.3. Practice Theory on Energy Poverty

Practice theory has been utilized to make sense of energy poverty, especially in the 2010s onwards. Herington et al. (2017) analyze the issue via the social practice theory, with respect to analyzing everyday practices of cooking. They propose that energy needs are shaped by social and cultural factors, unlike the previously dominant perception which evaluates the issue on economic considerations.

Herington et al. (2017) argue that socially embedded everyday activities influence energy needs and usage. Along with this argument, they examine how energy needs and demand are shaped by power relations, starting with welfare policies adopted by states (Herington et al., 2017). They emphasize that governance and social inequalities influence how energy needs are shaped and how people are included or excluded from energy-related activities. After Herington, Butler (2022) provides an approach within the framework of this theory. Butler (2022) brings practice theory and the capability approach together. Butler (2022) proposes that energy needs are socially constructed, and they are made out of social practices and governance structures. Constructing upon these arguments, Butler (2022) examines the socially embedded everyday practices which create and shape energy demand. This theory suggests that looking at household experiences shows how energy needs are formed. It also shows how people take part in or are left out of energy-related activities. It also emphasizes the importance of understanding how power dynamics and policies influence these processes (Butler, 2022).

In this framework, one can argue that this theory can contribute to the rights claim to energy with respect to social and political processes that govern who can participate in energy-related practices. Therefore, it is possible to argue that this theory can provide a theoretical foundation for claiming the right to energy. It is also possible to argue that this fits within the larger human rights framework, which says that having access to energy is essential for health, well-being, and dignity. In line with capabilities and energy justice approaches, practice theory indicates states' responsibility to address the issue.

There is no official recognition of energy as a human right in international law. However, the concept is increasingly discussed within the literature and policy frameworks. Rights claim to energy has been voiced by civil society actors as well. Hesselman (2022) argues that as a result of these efforts, energy has been increasingly framed within a human rights approach. It is recognized as fundamental to the fulfillment of other human rights. Also, its connection to justice and the responsibilities of states has been examined within the literature (Hesselman, 2022; Wewerinke-Singh, 2022). With the light of novel body of literature on examination

of energy as a human right issue, this chapter provides examination of three interconnected components of a human rights framework for energy: the discursive dimension, the mainstreaming dimension, and the litigation dimension, which is in line with Wewerinke-Singh's (2022) examination of a human rights approach to energy. The aim of this chapter is to incorporate the issue of energy poverty within a human rights perspective.

3.4. Human-rights Approach to Energy Poverty

The relationship between energy law and human rights law was started to be studied about twenty years ago (Huhta, 2023). International law has been recognizing energy's role in meeting fundamental needs through the analysis of the aforementioned relationship. Although more people are talking about energy as a human right, there is still a limited understanding of how current international or regional human rights laws specifically guide efforts to tackle energy poverty (Hesselman, 2023). In societies where general poverty has mostly been reduced, the idea of energy poverty is viewed differently. In such societies, Townsend's definition of relative poverty seems relevant. Townsend (1979) characterizes relative poverty as follows:

> *"The state in which individuals, families, and groups within a population lack the resources required to access the customary types of diet, participate in societal activities, and maintain the living conditions and amenities that are widely accepted or encouraged in their society." (Townsend, 1979, p.31),*

With this definition, Townsend (1979) emphasizes the essential conditions required for a decent life and specifies a list of necessities. It is possible to state that Townsend's definition is applicable to studies of energy poverty. Vorsatz and Herrero (2012) argue that energy can be included in this list since it is considered one of the basic needs for households. In this context, the issue is part of a larger idea of deprivation. It affects many different aspects of human life.

The human rights perspective within this discussion is particularly significant for three main reasons. Firstly, energy is essential for meeting fundamental human needs

such as access to clean water, adequate housing, and healthcare. Secondly, using a human rights framework can help include the issue in wider policy discussions. It also gives more credibility to efforts tackling the problem. Therefore, this approach also strengthens the debate about energy justice. Moreover, viewing energy poverty as a human rights issue highlights the need for accountability. Human rights can be a way to ensure accountability. UNDP (2005) contends that human rights tools have the potential to strengthen accountability mechanisms. This accountability can be in line with national plans to align with the international efforts and their goals. For instance, including the UN's Sustainable Development Goals (SDGs) in national agendas gives human rights supporters chances to shape the setting of national priorities (Winkler & Williams, 2017). In this framework, Whyte (2017) provides a significant example of how the use of rights-based language can be a powerful tool. In this case, Inuit representatives aimed to hold the US responsible for high emissions that harm their right to a cold climate (Harrington, 2006). They argued that their country, as the largest emitter of greenhouse gases, has the greatest responsibility for Arctic warming. The US was also held accountable for the negative impact on Inuit life (Harrington, 2006). The case is important because it focuses on holding authorities accountable to support collective rights. The aforementioned example shows how rights-based language can support justice claims.

Wewerinke-Singh (2022) explores a human rights approach to energy poverty through three aspects, which are discursive, mainstreaming, and litigation aspects. The discursive aspect looks at how human rights discussions can offer a guiding framework for creating policies and actions in the energy sector. This is especially important in countries where energy poverty is not clearly defined or widely recognized. By using such discussions, the issue can be included in larger ethical and systemic debates. The mainstreaming aspect aims to ensure that human rights become a core part of social and policy systems. This approach links social justice concerns with international human rights norms. Olawuyi (2013) suggests that this link can move the focus from an individualistic view of rights towards a framework which prioritize community needs and accountability of states. In this respect, it is possible to see that it is a transformative approach. It aims to make human rights principles a part of decision-making to encourage a culture of mutual respect

between citizens and the government, as shown in international agreements. The goal is to build a human rights culture by including these principles in state actions. Additionally, international organizations, especially the UN, support this objective. In 2009, the UN Development Group launched the Human Rights Mainstreaming Programme (UNDG-HRM), which aims to embed human rights norms and standards into the work of all UN agencies and initiatives. The litigation dimension is related to the legal dimension to ensure that public and private actors are held responsible for their actions. Therefore, this aspect is to provide accountability. Wewerinke-Singh (2022) indicates that this aspect has been used as a mechanism to make progress towards energy justice.

While discussing the merits of incorporating a human rights perspective into the discussions of energy poverty, it is also significant to point out the inherent shortcomings of this perspective. It is possible to identify significant challenges when applying human rights norms. It is important to note that relying solely on a human rights-based legal approach may not be enough to directly solve problems. Instead, it posits that a framework utilizing existing international legal mechanisms can provide meaningful support in addressing these challenges. Recognizing the limits of using only a legal approach and the challenges of focusing just on human rights doesn't reduce the value of making access to energy a recognized legal right. Recognition of such a right can help raise its priority worldwide.

Zaidan and Ibrahim (2024) argue that both international efforts within the framework of sustainable development and the rights-based approach to energy poverty have failed in practice. They point out that the vague nature of the SDG is a primary reason for these failures at the domestic level. Also, because human rights agreements are usually not legally binding, they often fail to be effective at the national level. Zaidan and Ibrahim (2024) explain that even if the right to energy is officially recognized, countries are not legally required to enforce these agreements. Additionally, putting such rights into practice is very difficult. For these reasons, they emphasize the need to establish monitoring and enforcement systems within global frameworks, such as those related to energy, international human rights law, and Agenda 2030, to achieve energy justice (Zaidan & Ibrahim, 2024).

To sum up, approaching energy poverty from a human rights perspective allows for the identification of how energy poverty hinders individuals' capacity to exercise their fundamental human rights. It serves as a mechanism to shift focus from private to public concern. However, this examination does not imply that a legal strategy grounded in human rights can provide definitive solutions for alleviating poverty. Building on the foundation of human rights arguments, the subsequent chapter examines the evolution of the right to energy within the international human rights framework, with an aim to investigate the possibility of this right. The following chapter examines the possibility of having such a right and explores how this approach can help address the gravity of the issue and mitigate the problem. Additionally, the chapter examines the limitations of this approach.

As underlined by the practice theory as well as the human rights approach, it is significant to take a deep look into the lived experiences of energy poor households. In this respect, there will be an overview of the lived experiences, prior to discussing the potential right to energy.

3.4.1. The Lived Experiences of Energy Poor Households

The existing research predominantly addresses the macro-level dimensions of the issue. This approach does not capture the full scope on the issue since there is limited attention to household experiences at the micro level. Recent studies point out this gap and indicate that incorporating household perceptions is essential for a comprehensive understanding (Bouzarovski, 2014; Middlemiss & Gillard, 2015; Sovacool & Dworkin, 2015). Healy and Clinch (2004) provided one of the early studies which points out the limitations of mere macro-level studies on this issue. Sovacool and Dworkin (2015) emphasize that relying solely on macro-level data does not provide a meaningful picture of the experiences of energy poor households. They underline the necessity for more detailed household-level studies. Simcock et al. (2018) also point out that the problem is not only about technical or financial issues. It is intertwined with the daily lives and experiences of households. Hence, A closer look at the household level is needed, as highlighted by the practice theory. In light of these studies, one can argue that examining the coping strategies of the

energy-poor households is necessary to have insights into how households respond to energy poverty.

A closer look at the household level is significant since it reveals the hidden aspect of the issue. The recent literature often describes the issue as a "hidden reality" for many households (de La Paz et al., 2022). De La Paz et al. (2022) argue that the quantitative methods do not adequately capture the full scope of those impacted. Energy poverty is a highly private experience for households. It is "private" since it influences the ways in which individuals regulate their use of heating, cooking, and lighting. In case of energy deprivation, households are frequently forced to adopt trade-offs that are specific to households' own situations. It is also a private experience in the sense that there is a highly hidden aspect of it (Cong et al., 2022; Simcock et al., 2017; Middlemiss & Gillard, 2015). It is "hidden" since the coping strategies and their impacts take place within the household. They often go unnoticed by society at large or policymakers. The hidden aspect of the issue reveals itself within the behaviors of households. Different strategies are employed by households in their attempts to devise solutions for coping with the restrictions and to identify ways of fulfilling their basic energy needs (Anderson et al., 2012; Brunner et al., 2012). Coping strategies include decisions related to eating, cooking, and other essential needs. These decisions often have direct consequences on health and well-being. For instance, households may restrict heating to a single room or minimize their hot water consumption. Some households may refrain from using refrigerators to minimize their electricity consumption. These strategies reduce the expenses, but at the same time, they often result in negative impacts on the well-being of household members (Bouzarovski et al., 2021).

Taking into account the complexity of studying the household coping mechanisms, they are examined under two categories, which are financial coping mechanisms and behavioral coping mechanisms. Energy poverty occurs when households cannot afford the energy required to maintain basic, decent living conditions, often leading them to reduce their energy consumption to manage high energy bills. This low energy use becomes worse when a large part of a household's income goes to paying for housing. This financial strain makes it harder for households to afford energy

bills. As a result, they have fewer choices for properly heating their homes, which increases the chance of under-heating or other types of energy hardship. Households use various coping strategies while facing difficulties. These include delaying payments, reducing energy use, and cutting other expenses (Brunner et al., 2012). Middha & Willand (2023) point out that many households even give up food or other basic needs to afford their energy bills. This choice, called as “heat or eat” decision, which is discussed in the following chapter regarding the nexus between the right to energy and the right to food, is an example of a financial coping mechanism. Middha and Willand (2023) emphasize that the connection between heating and eating is complex, and this situation is not a simple either-or choice. Instead, they suggest that heating and eating are closely connected and interdependent, with households using various coping strategies to manage and balance these basic needs in their daily lives.

Behavioral responses of households include how households adapt, cope, and make decisions when faced with limited access to energy or high energy costs. For instance, some households might reduce heating or cooling. They may also shift their consumption to off-peak hours. Others might rely on formal or informal support networks. These behaviors cannot be measured by macro-level economic indicators alone, but they need to be examined at the household level. Walker and Day (2012) argue that managing the hardships of energy poor households often requires making difficult choices that impact people’s health, well-being, and involvement in society. They identify several behavioral adaptations, w ich include reducing heating/cooling, limiting the use of household appliance, and shifting energy use to off-peak hours where possible (Walker & Day, 2012). Brunner et al. (2012) identify more coping strategies, such as adjusting daily routines and living patterns, including spending more time in smaller or better-heated areas of the home to conserve energy. Also, Brunner et al. (2012) give examples of financial coping mechanisms such as seeking informal support networks and applying for social assistance or support programs. Additionally, Cong et al. (2021) argue that household energy poverty is underreported in statistics because many households’ energy-limiting behaviors. These behaviors include cutting back on heating or cooling and cutting back on light to afford energy bills.

Research exploring these lived experiences, including a case study by Brunner et al. (2012) also show that adopting a modest lifestyle often becomes a necessary long-term coping strategy. Households employ diverse methods to manage energy restrictions and meet basic needs, but the range of options available to them is frequently very limited. This reinforces the argument that systemic changes are essential to address the issue effectively. Brunner et al. (2012) also point out that households facing these challenges tend to have small hopes for better their housing as well as their overall living conditions. This can be explained by Bourdieu's (1994) idea of "habitus," particularly the "habitus of necessity or modesty," where modest expectations become a normal part of their everyday lives.

Like Bourdieu's idea of the "habitus of modesty," Bauman's concept of "meta-humiliation" can help explain the issue. Bauman (1998) describes poverty as a "meta-humiliation". This definition means a deep shame that damages both personal and social dignity (Bauman, 1998). Meta-humiliation indicates the complex nature of poverty. This approach indicates that it is not just an economic issue, but also a social phenomenon. It has significant psychological and emotional effects. In this respect, energy poverty can be seen as a particular example of meta-humiliation. Energy poor households experience both material and non-material difficulties, including social isolation. The non-material aspect stems from the feeling that it can foster feelings of inadequacy and humiliation. In this regard, one can understand the issues impacts on health and well-being, by examining energy poverty of a household as a manifestation of meta-humiliation. Therefore, one can argue that Bauman's framework can provide a ground for a more holistic approach to addressing the issue. It is possible to argue that it provides a ground for claiming policies that prioritize non-material aspects of the issue, human dignity in particular.

To sum up, traditional measurements based on consumption or expenditure do not fully capture how households limit their energy use and sacrifice basic energy services to afford their needs. Hence, without a closer look, one can underestimate the scale of the problem. In this light, the hidden aspect of the issue can provide a ground for the potential right to energy discussions. One can argue that it is essential to examine the household experiences to understand the issue and consolidate the rights-based framework.

CHAPTER 4

THE POTENTIAL RIGHT TO ENERGY

4.1. Examining The Potential Right to Energy

Energy is one of the fundamental sources sustaining all aspects of life. Hence, it is essential to human well-being. However, it has not recognized as a distinct human right under international law yet, unlike rights such as water or housing. Although the right to energy has not been codified yet, it has been receiving attention in human rights law practices and discourse. A nascent but growing body of literature calls for this right. There are several treaties recognize rights related to electricity or energy in general (Hesselman, 2023), but not directly this right. There have been grassroots demands for this right as well, especially in times of energy crises, starting in the 1970s. In this respect, Hesselman (2022) points out the challenges of contemporary and future challenges and contends that the legal recognition of this right would be timely to deal with these challenges. Before discussing this potential right, there is a need to examine the motive behind the concept of "right". To examine a concept, it is necessary to deep dive into its roots, which is its etymology. Hence, there is a need to underline what "right" means. The term "right" stems from a Latin word, ius. This word denotes what is *"lawful and just... indicating what is righteous in conformity with justice"* (Haule, 2006: 370). The word indicates something lawful and just (Haule, 2006).

Jones (1994) argues that discussions about "rights" have become a major way of framing political debates. He also highlights how this shapes the way we understand morality and politics in everyday life (Jones, 1994). Talking about rights helps clarify what should be protected for individuals. Along with these rights come responsibilities, meaning the state is responsible for ensuring they are upheld. This

rights language has been employed as a tool for political demands, particularly towards states' responsibility to mitigate the issue.

Although there have been discussions which indicate that it is time to codify this right, it bears some difficulties both in its conceptualization and its application. The first challenge stems from the reason that the notion of this right is hard to pin down. Because the concept is unclear, there is no clearly established legal framework for this possible right. Creating one is a complex process that starts with defining what "energy" means. The term itself is vague, and this vagueness becomes even greater when dealing with the terms energy poverty and the right to energy. It encompasses a broad range of sources and uses, from electricity and gas to renewable energy forms, and its importance varies widely depending on context. Also, energy needs of households are defined in terms such as "adequate" or "sufficient". These ambiguous definitions do not specify clear-cut quantities (United Nations Human Rights Council, 2012). In addition to the difficulty of defining this right, another challenge is balancing the idea that basic rights apply to everyone with the fact that inequalities show up differently in various social and economic contexts (Walker, 2013). The meaning and use of this right depend on the specific situation, and its practical and political impacts vary greatly around the world (Walker, 2015).

A second challenge comes from limited resources within countries. Many nations face serious shortages in finances, technology, and infrastructure, which make it hard to provide or expand energy services. Besides these resource issues, weak institutional capacity can also prevent effective implementation of human rights-based approaches to energy poverty. Reports by UNDP (2016) and IEA (2019) show that poor institutional systems often lead to inadequate policies for supporting vulnerable households. A third challenge involves incorporating socio-economic rights into existing laws and policies within the human rights framework. Langford (2009) notes that this process requires aligning national laws with international standards and ensuring consistency across different sectors and different state levels. Within countries, this right relates to both public and private sectors. The public sector must consider social policy, development, and environmental factors, while responsibilities are shared across local, national, and regional levels. The multiple

sectors and multiple state levels necessitate cooperation to reach a coherent agenda to address the issue.

Also, discussions surrounding the issue have been incorporating novel demands, and these lead to the expansion of the boundaries of this right. This expansion is essential for ongoing discussions regarding the interaction between energy poverty and climate justice objectives (Walker, 2015, p. 28). Such expansion introduces additional complexities.

On the other hand, despite the theoretical and practical challenges, the recent discussions within the literature call for this right. Before going into the depths of it, the discussions surrounding the "right to fuel" might be a good starting point since it is the predecessor of the right to energy discussions. Rights-talk surrounding the issue has primarily been conceptualized as the "right to fuel" in the UK since the 1970s. The term "fuel poverty" was used to address the challenges faced by households in terms of their energy needs. Alongside this conceptualization, the "Right to Fuel Campaign" was initiated in 1975 as a response to increasing energy costs (Chesshire, 1986). The campaign was one of the early examples of grassroots movements on this issue. Its objective was to eradicate fuel poverty by ensuring that every household has access to adequate heating and lighting.

Within this context, the UK is a notable case since the country has been a centre of grassroots demands. These demands include the transformation of the energy system within the country, which many groups in the country support, including the Trade Union Congress (TUC) and the New Economics Foundation (NEF). For instance, the TUC has proposed reforms aimed at transforming the country's energy system. The NEF has proposed a system of "free basic energy". Another notable example from the UK is the "Energy for All" action. In their official statement, they called on the government to make structural reforms. *These reforms are demanded for ensuring energy affordability* (Fuel Poverty Action, 2022). In this respect, one can point out that the grassroots demands are calls for states' responsibility within this issue.

After presenting the background of the discussions towards this potential right, there is a need to delve into the term with a closer view by discussing the recent legal

developments in international law, as well as some examples of national law. In the last decade, there has been a growing literature in support of a distinctly articulated right to energy. These studies are examining the marketization of energy, its relationship with poverty, and discussions of energy transition (Hesselman, 2022; Hesselman et al., 2019). One of the earliest calls for this right came from Freling (2012). He argues for formal acknowledgement of energy as a basic human right, by stating that it is essential for life as well as for safeguarding a range of human rights. In this regard, Freling (2012) calls for recognition of this right with the full support of the UN. It is possible to argue that this rights-claim will be taken into action in future. This right claim is regarded as a leading candidate for inclusion in the international human rights framework of the UN. Such inclusion is primarily viewed as part of the second-generation socio-economic rights. It recognizes energy as a fundamental necessity for all people (Walker, 2015). This inclusion is similar to another second-generation socio-economic right, the right to water, which was recognized in 2010 through a Resolution numbered 64/292 adopted by the UNGA (UNGA, 2010). Identifying this right as a socio-economic right means it is protected by law and policy frameworks. It also means imposing duties on states to protect this right.

There are three main streams of discussing energy as a right (Hesselman, 2022). The first one is the discussion on the potential recognition of **energy as a universal human right**. The main argument for this recognition is that the lack of modern energy access hinders other rights in the fundamental documents of human rights. One of the early and remarkable examples internationally is "*Droit à L'Energie-SOS Future (Right to Energy SOS Future)",* which is an international organization founded in 2000 with an aim to advocate for the recognition of the right to energy as a fundamental human right. This is a notable example with respect to the international efforts for recognition of this right since this organization has a broad network, including 401 organizations from 68 countries. Additionally, another notable group claiming this right is the "*Right to Energy Coalition*". This group advocates for formal recognition of the "right to clean and affordable energy" across the EU. Their demands include the prohibition of energy disconnections. They also take a step forward regarding their demands to promote public and democratic

control over the energy system (EPSU, 2025). Also, as discussed previously, the most well-known global attempt is Goal 7 of the UN SDGs. However, the SDGs do not provide an explanation on how energy fits within the framework of international human rights (Bruce & Stephenson, 2016). As a result, there are still major difficulties in defining this right and deciding how to put it into practice.

The second stream of discussion is about considering **energy as a contractual right.** It acknowledges that this right may be based on legal or societal agreements. This branch is quite useful to evaluate the local conditions, but it is generally limited to the discussion of access to energy. In this respect, Jiglau et al.'s (2022) study discusses energy as a contractual right. This approach identifies energy as an agreement between the state and individuals. This agreement rests on the principle that the state is responsible for providing services in return for citizens recognizing its authority (Jiglau et al., 2022). Moreover, energy is commonly viewed as a commodity, treated like a private good or service, a perspective reflected in both EU and UN policy frameworks. However, Jiglau et al. (2022) question the idea of energy being seen simply as a commodity. They argue that it belongs to political communities. Jiglau et al. (2022) build their arguments upon the connection between existing rights and energy. They also draw a direct line between "human dignity" and energy. Jiglau et al. (2024) also underline the issue of households being referred to as consumers. They argue that energy should not simply be treated as a market commodity for "consumers". It should instead be acknowledged as a basic right. This perspective calls for reforms in institutions (Jiglau, 2024).

The third approach is the recognition of **energy as a derived human right**, which can be supported by some ethical theories, specifically by the justice theory of John Rawls. Hesselman (2022) explains that the concept of distributive justice provides a foundation for viewing energy as a derived right. Recognizing energy in this way highlights its important role in broader discussions about social justice.

After the examination of the approaches to this potential right, it is discussed within the context of the permeability of rights.

4.2. The Right to Energy Within the Context of Permeability of Rights

Human rights are closely linked to each other. Achieving one right helps to achieve other rights as well. This close relationship is called the "permeability of rights" (Leckie, 1992). According to Donnelly (2013), this connection promotes a complete and unified understanding of human dignity as well as justice. Based on this concept, it is possible to advocate for the right to energy as it relates to the other rights. Without reliable and affordable energy, many basic human needs and socio-economic rights cannot be fully met. Energy in a household is crucial for fulfilling essential needs, including water, nutrition, adequate housing, healthcare, as well as communication (Tully, 2006b; Wewerinke-Singh, 2022). Within this context, the right to energy is connected and interdependent with the rights to health, housing, and education (Omar & Hasanujzaman, 2021), environmental quality and development (Sattler, 2016), as well as the right to water (Quintavalla et al., 2023). In light of the concept of the "permeability of rights", the following discussion examines the rights interrelated with the right to energy.

Table 8. The Rights Which Are Intertwined with The Potential Right to Energy

The Right to Electricity
The Right to Life (with Dignity)
The Right to Physical and Mental Health
The Right to Adequate Housing
The Right to Water and Food Security

4.2.1. The Right to Electricity

While electricity access is the most visible aspect of the discussions on energy poverty, and it has been discussed in the literature within the framework of human rights, no declaration or resolution explicitly recognizes it as a human right. Adequate access to electricity is essential for maintaining a dignified standard of living (Grossman & Trubina, 2021). It is a starting point for policy actions to overcome the lack of access to energy and energy services and to address energy

poverty (IEA, 2021; UNDP, 2020; World Bank, 2017). From a legal standpoint, the recognition of this right appears to be in its early stages (Löfquist, 2019). An early recognition came from Colombia. The Colombian Supreme Court stated that the right to electricity is connected to the rights to life and health. It requires that households receive a reliable supply of electricity (Hesselman, 2022).

Even though this right is not identified as a human right distinctively, there is a body of studies which advocate for the protection and promotion of access to electricity by framing it within the discourse on human rights. Also, the World Bank identifies universal electricity access as a significant pillar of poverty alleviation efforts. The World Bank (2017) contends that increasing access to electricity is essential for driving transformative development. It also underscores the significance of energy in fulfilling the SDGs. (World Bank, 2017).

The clearest mention of the right to electricity in international human rights law can be found in Article 14(2)h of the CEDAW. It is the sole international agreement that directly references electricity as a human right, by indicating that women should be provided with adequate living conditions, including access to electricity and water. Although the CEDAW affirms that access to electricity can be recognized as a right, this right has not been globally recognized due to legal, political, and economic issues. Löfquist (2019) argues that electricity should neither be considered a contractual right limited to certain citizens nor a universal human right. Defining electricity as a right for citizens creates the problem that it might end up neglecting the needs of non-citizens. Moreover, the CEDAW is merely indicating women. Hence, there is a lack of claim to electricity as a right for all individuals, which is a fundamental aspect of universal human rights.

When electricity is seen as a basic human right, it means that everyone is naturally entitled to it. This entitlement can bring several complications. There are ongoing discussions about who should be responsible, whether governments or private companies. Guaranteeing this right assumes that electricity is essential for everyone; but this is not always the case because human needs vary. Although electricity often helps meet these needs, it is not the only way to fulfill them, since the needs

themselves are the primary goals. However, guaranteeing this right may sometimes conflict with environmental sustainability. Therefore, as Maniruzzaman and Al-Saleem (2025) suggest, electricity can be considered a "derived right" that is often necessary to protect other rights.

4.2.2. The Right to Life (with Dignity)

The right to life is recognized by different treaties, and the Human Rights Committee has recognized that it extends to a "life with dignity".[3] The Committee clearly stated that the right to life requires States to provide access to essential goods and services, such as electricity and water. This responsibility comes from a larger duty for States to take all necessary actions to fix social problems that could either threaten people's lives or prevent them from living with dignity. In this respect, one can conclude that HRCtee's inclusion of dignity as part of the right to life indicates broader connections with other rights and puts responsibility on states, as noted by the Committee itself.

Access to energy is fundamental to fulfilling this responsibility, as without it, ensuring a safe and secure living environment becomes impossible. Energy has a crucial role in human development, and there is an intrinsic link between household energy needs and human dignity (Grossman & Trubina, 2021; Quintavalla et al., 2023). There are detrimental impacts of household energy poverty on the dignity of individuals (Grossmann &Trubina, 2021; Ngai, 2012). Grossmann and Trubina (2021) argue that energy poverty has a detrimental non-material impact upon energy-poor households. These non-material impacts include experiences of humiliation, shame and diminished self-esteem among affected households (Grosmann & Trubina, 2021). Given these negative impacts, it can be argued that this link makes the right to life and the right to energy interconnected. Building on this understanding, Quintavalla et al. (2023) take this discussion a step forward and recommend explicitly emphasizing this intrinsic connection to promote the acknowledgement of the right to energy.

[3] Human Rights Committee, General Comment No. 36 on the Right to Life (30 October 2018) UN Doc. CCPR/C/GC/35, paras. 3, 21-25.

On the other hand, human rights law offers limited guidance on the ways in which energy poverty may constitute a violation of the right to life (Hesselman, 2023). There is ongoing debate about how the right to life is connected to socio-economic rights (Hesselman, 2023). Ngai's (2012) study stands out within this context. The aforementioned study identifies energy access as central to human survival as well as human development. Ngai describes the right to energy as a basic human right because of its crucial role in both survival and its absence impact on dignity. The study argues that having access to energy services is important for human development during peaceful times and becomes essential for survival in times of conflict. Ngai powerfully asserts that "it is a right that ought to be formally recognized and protected for all individuals, at all times, in all places" (Ngai, 2012, p. 43). Furthermore, Ngai highlights that in some conflict situations, more lives are lost not from direct violence but due to the collapse of essential services and infrastructure, which leads to harsh and unhealthy living conditions (Ngai, 2012).

4.2.3. The Right to Physical and Mental Health

Energy poverty is not only the struggle to pay for energy. It also includes cutting energy use to a point where it harms a person's health (Anderson et al., 2012; Boardman, 1991; Bouzarovski & Petrova, 2015; Liddell & Morris, 2010; Thomson et al., 2017). Therefore, understanding the problem means recognizing when households lower their energy consumption so much that it affects their well-being negatively. This form of deprivation infringes upon the fundamental right to health.

There are multifaceted impacts of living in cold homes. It affects both physical and mental well-being. Research on the health effects of energy poverty in households shows that people need enough energy to maintain their well-being (Liddell et al., 2010; Wang et al., 2024). The negative health effects highlight the urgent need for policies to address these problems. In this context, Sovacool (2015) frames the issue as one of justice by showing how thermal comfort is closely linked to both physical and mental health. Also, Thomson et al. (2017) indicate that in the majority of countries in Europe, the energy-poor population is statistically more likely to report poor health and emotional well-being compared to the non-energy-poor population.

According to AbuQamar et al. (2023), households without reliable electricity tend to experience much higher rates of depression and anxiety compared to those with steady energy access. Additionally, Shapira et al.'s (2021) study pinpoints a trade-off between buying medications and paying energy bills, similar to the trade-off between food and energy.

Also, the intersection of the right to adequate housing, the right to energy and the right to health can be conceptualized as "the right to have a warm household". Although there is no specific statute designated as this aforementioned right, there are some policy frameworks which imply it. The European Committee of Social Rights has stressed that providing adequate warmth is essential for ensuring a decent standard of living (Council of Europe, 2025). The Committee also points out its essentiality on ensuring public health as well. Likewise, the European Parliament states that ensuring people have access to energy for heating is an essential part of the right to adequate and affordable housing since the deprivation of heating directly affects health and overall well-being (European Parliament, 2021). As an example of this policy, the UK government introduced the "Warm Home Discount Scheme" in 2012, which provides a discount on the winter electricity bill for energy-poor households.

Lastly, there is debate about the exact definition of being "old" because of the wide differences within older age groups (Nelson, 2004), research shows that older people are especially vulnerable to struggling with energy bills. They are also more likely to suffer negative health and well-being effects from living in cold homes (Hills, 2012). This vulnerability is largely due to the health risks caused by cold housing. Additionally, excess winter deaths, which are linked to energy poverty, mostly affect elderly people, as found in the study by Rudge and Gilchrist (2005). In this respect, the negative impact on older people provides an example of the interconnection between the right to health and the right to life.

4.2.4. The Right to Adequate Housing

In recent years, the connection between the right to adequate housing and the right to energy has been established in discussions on energy poverty. These discussions

were given rise with the energy crisis in Europe. The Routledge Handbook of Human Rights and Climate Governance report (2018) indicates that the current housing and energy poverty crisis in Europe should be viewed as a human rights issue necessitating appropriate interventions (Silverman, 2018). Silverman (2018) argues that energy poverty crisis and its impact on the realization of housing rights are interconnected (Silverman, 2018). Because housing and energy are closely connected, the state of housing is an important way to understand the issue. The human right to adequate housing means being able to live in a safe, peaceful, and dignified environment. Silverman (2018) argues that energy security is a key part of this right.

This right is recognized in international human rights treaties, including Article 25 of the UDHR and Article 11 of the ICESCR, and is elaborated by the Committee on Economic, Social and Cultural Rights (CESCR) (Ngai, 2012). The CESCR defines the right to adequate housing as "the right to live in a place that provides security, peace, and dignity" (General Comment No.4, 1991). In this regard, one can argue that this definition implies that this right includes energy as well since energy is vital for health and well-being. Therefore, adequate housing means more than just having four walls; it also requires access to basic facilities needed for health and safety. Additionally, it involves having essential infrastructure like water and being close to important services (Hesselman, 2023; Leckie, 1992). Additionally, the UN Office of the High Commissioner for Human Rights underscores that security, peace, and dignity are fundamental to this right. The UNDP Report on Human Security (1994) further links housing rights to broader human security concerns, including access to essential services and infrastructure.

Based on the international framework mentioned earlier, addressing the issue can be done by using a human rights approach centered on fulfilling the right to adequate housing. It is also important to ensure that households receive enough energy to maintain a decent standard of living. Therefore, the right to adequate housing includes meeting essential energy needs for households. This link highlights the significance of energy. In addition to examination of the links between the right to energy and other rights, there is a need to take closer account of the nexus between energy, water, and food security (de Amorim et al., 2018).

4.2.5. The Nexus Between Right to Energy, Water and Food Security

The nexus between energy, water and food was introduced by the Food-Energy Nexus Programme of the United Nations University (UNU) in the early 1980s. The concept gained international prominence after the 2011 Bonn Nexus Conference, where the concept was coined (OECD, 2014). Moreover, it can be seen that the SDGs also embrace this nexus by simultaneously adopting SDG 2, which aims to achieve food security; SDG 6, which aims to ensure universal access to safe and affordable water; and SDG 7, which aims to achieve universal access to affordable energy. Through these goals, the UN has been taking into consideration this nexus. Stemming from this interdependence, it is possible to infer some ideas concerning the right to energy.

The UN General Assembly adopted a resolution recognizing a separate human right to "a clean, healthy, and sustainable environment" (UN General Assembly, 2022). This recognition provides a foundational framework that supports and enhances the already established rights to water and sanitation. While the resolution is not legally binding, it might lead to positive developments because it demonstrates a political commitment which increases the accountability of states. It may also lead to the development of coherent policymaking in both environmental and human rights domains. From the nexus between three notions, it is also possible to discuss the right to energy within this framework.

It is possible to argue that the connection between the right to energy and the right to water is straightforward. Energy is necessary to provide water. Therefore, these rights are interdependent on one another. In other words, accessing clean water requires energy. Therefore, the right to clean water, which supports many other human rights, fundamentally depends on the right to access energy services. The UNGA formally recognized the human right to water and sanitation in 2010, following a series of steps since key human rights documents were adopted. Several treaties including UDHR and ICESCR, emphasize the importance of these rights, with recognition from the CESCR affirming that both water and sanitation are essential for an adequate standard of living and health. CESCR General Comment

No. 15 defines the right to water and highlights its dependence on energy. This Comment mentions that securing the right to clean water is dependent on energy rights because water and sanitation services require energy (Global Health Rights, 2020). This link indicates the need for legal frameworks and rights-based discussions to acknowledge energy right as a fundamental prerequisite for enjoying other rights. It is the case for the right to water in particular. Quintavalla et al. (2023) argue that the recognition as well as the implementation of the human right to energy can benefit from the more developed frameworks established for the human right to water. Hence, there is a possibility to draw lessons from the right to water's path of becoming a right while discussing the possibility of the right to energy. Human rights legal instruments that recognize the right to water also emphasize its connection to human dignity. Quintavalla et al. (2023) argue that linking the energy right with human dignity in a similar way would help strengthen the recognition and protection of this right.

The World Food Programme (WFP) acknowledges the close relationship between these rights. It indicates that energy is essential for food security (WFP, 2024). At the household level, this link demonstrates itself by choices. Households face "heat or eat" decisions because they are in such a state that they have to choose between one of them due to their financial limitations (Bhattacharya et al., 2003; Ningi et al., 2021). This forced choice has significant health consequences (Grey et al., 2017; Snell et al., 2018). This choice exemplifies a coping strategy. They become more severe when financial resources are too limited to cover basic living costs. This condition leads to a reallocation of spending priorities, particularly between food and fuel costs (Anderson et al., 2012). This situation deepens poverty and social exclusion. It also makes it harder for households to escape the cycle of deprivation.

For these low-income households, the interconnection between energy, water, and food security becomes particularly critical and challenging. It is due to the necessity that households which struggle financially minimize their energy consumption to the absolute essentials. Low-income households have so little room to maneuver in their daily budgeting that heating may often be sacrificed in favor of other essential needs. According to Anderson et al. (2012), households facing financial difficulties often

cut back on heating first in order to allocate limited resources to more urgent expenses such as food, rent, or medical care. Reducing energy use can negatively affect the well-being of these households. Moreover, according to the 2023 Global Sustainable Development Report, “heat or eat” decisions have increased in recent years due to rising living costs, especially since 2020. This report highlights the global cost-of-living crisis that individuals are facing, which has been exacerbated by the pandemic and its aftermath, resulting in higher food and energy prices that have been further intensified by the conflict in Ukraine. Food prices peaked in March 2022 with the onset of the war, and although there has been a slight decline since then, they remain at historically high levels (Food and Agriculture Organization, 2024).

4.2.6. The Nexus Between Climate Change and Energy Poverty

Recognizing energy as a human right leads to considering the broader environmental justice concerns raised by Hall (2013). As Hall (2013) discusses the issue with a broader environmental justice since energy systems often contribute to social and environmental harms. This approach can be applicable at the household level. It is possible to argue that applying this wider approach at the household level is significant since energy-poor households often face unfair burdens that add to existing environmental injustices. By using this broader justice approach, policies to secure the right to energy go beyond just providing access and affordability. They also underline deeper inequalities in how energy is produced and used because they have an impact on the well-being of households. Therefore, one can argue that the right to energy cannot be separated from environmental justice issues.

From the perspective of climate change, the scale of the global climate emergency is more evident than ever. The seriousness of the issue is demonstrated by the increasing occurrence of extreme weather events like heat waves, floods, and droughts (International Renewable Energy Agency [IRENA], 2023). Recently, there has been rising attention on the urgent need for transitions across all sectors and systems to address these challenges (Intergovernmental Panel on Climate Change, 2023). This transition is most evident in the energy sector. As energy prices continue

to rise, the forecasted impacts of climate change are becoming increasingly pronounced. The nexus between household energy poverty and climate change underscores the gravity of the issue of energy justice. Consequently, discussions aimed at mitigating energy poverty for vulnerable populations are increasing significantly. Thus, it is vital to discuss the possibility of energy as a right. Analyzing energy poverty offers a unique chance to think about the standards and goals tied to a global energy transition, which affects the complex systems connected to our lives and the environment. This indicates for an opportunity to expand discussions on energy justice claims within the context of the global energy transition, which is an urgent necessity in contemporary times.

Energy production and consumption account for approximately three-quarters of global greenhouse gas emissions, making them a central focus in the fight against climate change (IEA, 2025a; IEA, 2025b). Consequently, energy-related issues have become central to both academic studies and policy formulation concerning climate change. The 2019 Global Sustainable Development Report highlights the persistent prevalence of poverty and the unprecedented scale of inequality worldwide, while emphasizing that humanity currently faces a critical juncture in addressing climate change and biodiversity loss. Hence, it is possible to identify that energy is at the centre of the discussions of climate change. Similarly, climate change also has a significant role within the discussions and mitigation efforts of energy poverty since climate change intensifies energy poverty (Harrington, 2006). In this context, it is clear that addressing climate change and reducing energy poverty are closely connected. Understanding how they influence each other is essential for developing strategies to both mitigate the impacts of climate change and reduce energy poverty, as highlighted by Sawyer and Jessel et al. (2019). As an example of this embeddedness, Addison and Roe (2024) argue that humanity is confronted with at least two critical imperatives to eradicate poverty on a global scale, which are energy poverty and the obligation to protect nature. They argue that it is necessary to consider both issues at the same time from a global perspective. Also, studies of energy poverty provide insights concerning the effects of climate change on vulnerable populations (Hallegatte & Rozenberg, 2021). In recent years, the need to expand energy access rights in developing countries has become a key topic in

discussions on how to respond to the effects of climate change. Sen (2013) argues that when thinking about human freedom today and in the future, we must recognize that many people around the world need greater access to energy. Therefore, we need to understand the different needs of people and the energy required to support the freedoms necessary for a decent quality of life. Sen (2013) indicates that addressing these issues is essential for ensuring equitable access to energy and mitigating the impacts of climate change on vulnerable communities. The conceptualization of energy poverty through a human rights lens also has implications for evaluating the potential impacts of climate change on vulnerable populations, especially in the future. By applying this human rights perspective to energy poverty, it becomes feasible for states to fulfil their responsibility to mitigate the adverse effects of climate change on these at-risk groups.

Ensuring an equitable global energy transition is vital for safeguarding the human rights of billions and for meeting the climate objectives outlined in the 2015 Paris Agreement. The economic consequences of climate change are distributed unequally among regions, nations, households, and individuals (Méjean et al., 2024). The Intergovernmental Panel on Climate Change (IPCC)'s 2023 report indicates that with high confidence that the losses and damages associated with climate change will be heavily concentrated, disproportionately impacting the poorest and most vulnerable populations in the Global South. It is also argued that it will heighten inequalities within countries (Paglialunga et al., 2022), but for both arguments, large-scale, systematic, and conclusive evidence remains limited. Hence, poorer countries will bear a greater burden from climate change (Tol, 2018). Since negative impacts of climate change disproportionately affect marginalized groups, the environmental aspects of energy poverty are closely linked to human rights (Silverman, 2018).

The problem of energy poverty is expected to worsen as the impacts of climate change intensify (CAN Europe, 2025). Can Europe (2025) highlights that low-income households are likely to face a greater share of the challenges caused by the energy transition. This imbalance reveals the link between climate change and economic inequality. In this respect, it is possible to argue for the urgent need to prioritize energy-vulnerable households in climate and energy policies at the same

time. Addressing this challenge requires a comprehensive approach because it needs to involve coordinated efforts from both the public and private sectors to ensure an equitable and just energy transition (CAN Europe, 2025).

The intersection of climate change and human rights was highlighted by rulings from the European Court of Human Rights in April 2024. This ruling is significant because it addressed climate impacts and energy poverty simultaneously. In a notable Swiss case, 2,400 women claimed that heatwaves which have been increased due to the effect of climate change harmed their health. The Court found that the government's failure to meet its climate commitments violated their human rights. This violation specifically concerned the right to protection from serious climate-related dangers affecting life, health, well-being, and quality of life (Wells, 2024). The ruling highlighted that a government's failure to act on climate responsibilities violates citizens' rights. It also creates an important precedent for future legal cases related to energy poverty. Additionally, the "right to be cold" case, brought by the Inuit people against the US, argued that the US's high greenhouse gas emissions violated their human rights. This violation stems from the reason that the states' aggravation to global warming and threatening their traditional way of life (Harrington, 2006). This case introduced the "right to be cold". This novel rights-claim is a framework to understand the environmental and cultural impacts of climate change on Indigenous communities. However, it also showed the difficulties in using international human rights law to address climate change, especially when it comes to proving a direct cause and dealing with the limits of existing legal systems.

In addition to the climate change and energy poverty relation, energy poverty, along with just energy transition and energy justice, has become a central focus in the move toward sustainable energy systems and is increasingly recognised in academic literature (Sovacool & Dworkin, 2014). Also, the international organizations have been evaluating energy poverty and energy transition simultaneously. The EU evaluates energy poverty as a challenge that can be addressed within the process of energy transition. It emphasizes that a structural shift toward climate neutrality can help resolve associated social problems, such as energy poverty, while also mitigating social inequality (European Commission, 2023, p. 2). On the other hand,

there are studies pointing out the projections that the energy transition will aggravate energy poverty. Ürge-Vorsatz & Herrero (2012) discuss that the transition to a low-carbon economy may lead to increased electricity prices due to measures such as carbon pricing and subsidies for renewable energy. The increase in costs may cause problems for vulnerable households. It has a potential to harm them or even prevent them from accessing energy. Therefore, one can identify that the current energy transition might bring new risks for these vulnerable groups. It can also increase existing inequalities.

The energy transition is regarded as both a solution and an opportunity to advance global development goals. This recognition stems from the reason that it includes poverty reduction, health improvement, and education, as emphasized in the annual reports by the IEA (IEA, 2023). International organizations increasingly advocate framing the energy transition as a pathway to achieving universal access to modern energy. However, despite this framing, progress toward universal energy access has slowed in recent years. Furthermore, there has even been regression in some regions. IEA (2023) estimated that approximately 775 million people worldwide lacked access to electricity. There are also 2.2 billion people deprived of clean cooking fuels (IEA, 2023). This energy deprivation disproportionately affects developing countries, where fluctuation of energy prices has intensified concerns around food security, largely due to rising fuel and fertilizer costs, as well as growing debt and fiscal pressures (IEA, 2023). In this regard, currently, it is possible to argue that the world is in a liminal space regarding the energy transition. Without policies, existing disparities and poverty risk will be increased rather than intended alleviation. Specifically, the energy transition has the potential to deepen inequalities in access to affordable, clean energy by imposing financial burdens on low-income consumers who may struggle to meet increased costs (Garsous & Kozluk, 2017). Therefore, one can argue that there is a pressing need to address how the energy transition impacts vulnerable populations to ensure that this shift does not worsen the already severe challenge of energy poverty, but instead contributes meaningfully to sustainable and equitable development.

Finally, in discussions about the energy transition, the idea of a “just transition” has emerged in human rights law. This concept emphasizes ensuring that all social

groups equally share the benefits and burdens in the process of the transition towards carbon-neutral societies (Hesselman, 2023). Although still evolving, this idea was the focus of a 2020 report by the UN Special Rapporteur on extreme poverty and human rights, which highlighted that a human rights-compliant just transition should deliver a "triple dividend": a clean environment, decent job opportunities, and universal access to affordable goods and services, including modern energy consistent with the UN's SDGs (UN Special Rapporteur, 2020).

Recent discussions on energy transition have started to include the concept of "human security". This concept is distinguished from traditional national security. This inclusion broadens the conversation and provides a framework to assess energy poverty through a human rights lens. The concept changed the way people think about security. As global problems have changed, issues such as poverty and poor living conditions have become key topics in security discussions (Buzan, 1983; Novikau, 2022). This term gained attention in the literature after it was mentioned in the 1994 UN Development Programme's Human Development Report. This report described the aforementioned concept as the right to live safely and with dignity (UNDP, 1994). In terms of energy poverty, human security stresses the importance of having energy to meet basic needs and improve quality of life (Novikau, 2022). Energy plays a key role in human security because not having enough energy can harm people's well-being (Charlier & Legendre, 2023). Therefore, energy is vital for maintaining human security. When family budgets are tight, people often have to make tough choices between paying for energy or other essentials like food, healthcare, or entertainment, showing how energy poverty threatens human security. In this regard, it is possible to indicate that achieving human security is not possible without effectively addressing the impacts of energy poverty.

In a nutshell, it is possible to argue that the idea of human security shifts the focus to prioritizing people's well-being. In this regard, this approach is useful for addressing energy poverty from a human rights perspective because it looks at the living conditions of households without enough energy access. Using human security as a framework helps us talk about the right to energy and understand energy poverty through the lens of human rights. By highlighting both security and fairness, the

discussion goes beyond just improving energy efficiency. Although better energy efficiency can help reduce household costs, it is not enough to completely solve energy poverty. It is possible to suggest that such measures provide only temporary relief from the persistent challenges faced by energy-deprived households.

4.2.7. The Challenges of the Potential Right to Energy

The recognition of the "right to energy" faces a number of challenges, which can be grouped under two headings. First, there are ambiguities in defining this right. It is also an issue how to apply it in practice. Hesselman et al. (2019) discuss how these conceptual and practical uncertainties have complicated the gradual development of the right to energy within international law. Second, resistance from existing power structures hinders this progress as well.

The first set of challenges can be primarily addressed by mentioning the ambiguity of this right. Similar to the terms such as "energy" and "energy poverty," the "right to energy" is complex and context dependent. It has yet to be universally recognized as a distinct human right. The meaning of these terms is unclear. Their connection to other rights makes it hard to define the boundaries of this right. Therefore, it is a cumbersome process to set clear legal responsibilities for states and other actors. In this respect, Hesselman (2022) argue that even if the right were to gain universal recognition, there remains a risk of overly broad legal interpretations. Such vagueness could hinder effective enforcement (Hesselman, 2022). Reflecting on these challenges, Hesselman et al. (2019) note that both conceptual and practical ambiguities have slowed the international recognition of the right to energy. There is also a possibility of an added burden on already under-resourced human rights monitoring systems. Wewerinke-Singh (2022) argues that the current institutional capacity and resources are not sufficient to implement the policies to ensure the right. Therefore, Wewerinke-Singh (2022) points out the need for additional resources and institutional capacity building in the implementation process of this right. Moreover, the interdependence between the right to energy and other rights, especially with the right to an adequate standard of living, the right to electricity, the right to health and the right to life, creates difficulties in the implementation process.

Regarding the second set of challenges, which stems from the resistance from the existing power structure, established political economic interest creates an impediment to meaningful alleviation efforts to energy poverty. These established bodies may resist changes which may impact the expected profit within the energy sector. Sovacool et al. (2017) point out that the fossil industry is one of the examples of this resistance. The study reveals that the companies within the fossil fuel industry can hinder progress toward a sustainable energy system. These actions lead to aggravation of energy poverty households as well (Sovacool et al., 2017; Sovacool, 2014). Another challenge that stems from the existing power structure is the capacity of existing political and economic interests' influence on energy policy, which has a direct impact on household energy poverty. Wewerinke-Singh (2022) indicates that established interest has a direct influence upon energy policy; therefore, energy policies favor large-scale and centralized energy production and its producers. These policies make it difficult to implement the necessities of the right to energy.

Along with the aforementioned challenges, it is possible to see that the recognition of this right is unlikely to be achieved in the short term. It is due to the reason that it entails negotiations among states, international organizations, and other actors involving in these discussions (Quintavalla et al, 2023). It is anticipated that this recognition will gain prominence within discussions surrounding energy transition and climate change, particularly as the latter will exert a more severe impact on populations experiencing energy poverty (Jessel et al., 2019; Li et al., 2023).

This thesis argues that recognition of energy poverty as a justice issue provides a basis for the potential right to energy. One can argue that energy as a justice concern puts household energy poverty at the center of energy discussions, which are directly related to discussions surrounding climate change and the impacts of energy transition. In this respect, this thesis proposes that the definition and framework of such a right cannot be determined solely by academic discussions and theoretical perspectives. Conversations about this right need to incorporate the real-life experiences and coping mechanisms of the households that are facing challenges or seeking improved access to energy services in practical, everyday contexts.

CHAPTER 5

CONCLUSION

In this thesis, energy poverty is conceptualized as fundamentally a political economy problem, shaped by market relations, the state, and its institutional capacity, as well as the structural factors.

In discussions concerning energy poverty and the right to energy, the prevailing narratives are largely influenced by the international organizations, especially by the UN and the EU. These narratives tend to emphasize efficiency as the primary challenge, rather than affordability. As discussed in the second chapter of the thesis, the policies and frameworks provided by the international organizations are fragmented. There is a lack of a coherent and comprehensive approach which addresses the root causes. Also, it is possible to observe the general tendency by international organisations to present the efforts as if their aim is the "eradication" of the issue, the tools they propose are not capable of eliminating it. They generally have an aim to decrease the struggle of households by short-term precautions. The picture provided by these efforts shows that the aim is to mitigate the issue with short-term provisions.

Furthermore, the international frameworks present the issue mainly as a problem that can be resolved through the efforts of energy efficiency efforts. Hence, this approach minimizes the role of the state. However, it is fundamentally a matter of affordability. Therefore, it necessitates the assumption of responsibility by the public sector. States are the primary actors in implementing measures at both the national and local levels. In this framework, claiming this right might be a way to put states at the center of the discussions. Claiming such a right implies that states are responsible for devising and implementing legal and policy frameworks. These policies need to

target the affordability aspect. Moreover, to provide an eligible strategy to mitigate the issue, one can argue that there is need of both national and local level efforts, which would be devised to complement each other. Hence, there needs to be further studies concerning the role that needs to be played at the local level.

As discussed in the second chapter of the thesis, it is possible to state that existing international policies, laws, and regulations with respect to the issue are also inadequate to address the root causes. International frameworks mainly provide short-term solutions to this structural and systemic issue. These root causes and the reasons for the perpetuation of the issue can be examined through a critical political-economic approach. This approach investigates the issue by examining the power relations and market systems, as well as the role of the states. Investigation on root causes shows that addressing the issue merely from a human rights perspective is not adequate to tackle the issue. Also, through the critical political economic approach lens, it is possible to argue that this lens aligns with framing energy poverty as fundamentally about justice. Therefore, this approach indicates the necessity of addressing the issue as a justice matter.

As discussed in the third chapter of the thesis, energy justice indicates recognizing that achieving procedural and distributive justice demands wider policy and governance measures. In this regard, this thesis proposes that the energy justice approach underlines concerns about fairness and affordability with respect to the issue. This approach also prioritizes the well-being of households. In these respects, this thesis argues that the justice claim in relation to energy poverty surpasses human rights terminology. Therefore, efforts to tackle the issue can have meaningful impacts if the issue is centered upon justice and well-being of the households. Also, the other theoretical frameworks, which are the capabilities approach and practice theory, provide a basis for claiming the right to energy. The capabilities approach provides a normative and human-centred framework. In this way, it would be possible to construct a right which prioritizes the well-being of households. This approach is also significant in the sense that it takes into account human dignity, which is also a vital part of the human rights discussions. Also, along with energy justice and capabilities approach, practice theory provides a significant perspective

on this potential right. This perspective is the everyday practices of energy-poor households. As Grossman and Trubina (2021) underline, understanding how households cope with the hardships can provide valuable insights into the problem from the perspective of those affected. The coping mechanisms demonstrate both behavioral and financial responses are significant while constructing the right to energy since these responses are both veiling and unveiling the issue. These responses veil the issue in the sense that the severity of the problem is more than what is measured by the conventional methods. Also, the responses unveil the issue since they are coping mechanisms. The households find different ways to cope with the problems; therefore, these mechanisms mitigate the issue to some extent for the energy-poor households.

In the fourth chapter of the thesis, the potential right to energy is discussed with respect to the instances where this right has been implied. Within this chapter, this right is examined through the concept of the permeability of rights. Additionally, the nexus between energy, water and food security is discussed at household level. In this regard, stemming from the nexus between the right to energy, water, and food security, it is possible to infer the significance of the right to energy and the inseparability of them.

It is stated that while energy remains a fundamental source essential to sustaining life and human well-being, it has yet to be formally recognized as a distinct human right. Despite this, there has been an increase in the discussions surrounding the issue. There are implicit attributions to this right. There is also growing grassroots movements. To move forward, the codification of this right within international law seems essential. This step taken forward in the legal sphere can have an impact on discussions and shift the focus to the responsibility of states. However, in the light of the examination of energy poverty from a critical political economic approach, the codification is not sufficient. This rights-claim can be taken forward by constructing this right by centering energy justice at the center. With this approach, it is possible to point out the necessary structural changes. These include energy market dynamics, power relations and political interests. It is also significant to challenge the dominant narrative of the international organizations, which mostly reduce the issue as an

efficiency problem. Instead, the discussions need to address structural factors as well as energy affordability, which have a direct impact on households.

A human rights approach to the issue helps to raise awareness and recognition of the problem. By using human rights language, the term gains more visibility and legitimacy. This helps make the issue more prevalent. This also leads to incorporation of this issue in public and policy debates (Heinrich Böll Stiftung, 2022). In addition to framing the issue as a human rights matter, Quintavalla et al. (2023) emphasize that taking active steps to tackle the problem is essential for making meaningful progress. Viewing it as a human rights concern also shapes the way people discuss the issue. Using human rights language shapes the conversation around energy justice, linking energy access to fairness and equity. However, simply framing energy poverty as a human rights issue does not completely solve the problem. Needless to say, the human rights perspective alone is not a cure-all.

A human rights-based approach to energy poverty is significant in the sense that it addresses the issue inclusively. It also provides a normative and legal ground for alleviation of the issue as well. On the other hand, a mere human rights approach remains insufficient to address the issue. This approach can have meaningful results if there are accountability mechanisms for international human rights instruments, as indicated by Olawuyi (2013). The possible codification of this right would be a significant but insufficient progression. Along with the codification of it, there needs to be more research towards understanding the experiences of energy-poor households, along with their coping mechanisms, to grasp the issue in a meaningful way. Without this close up examination, it would not be possible to come over the "hidden reality" of energy poverty.

As discussed previously, poverty, energy, and climate issues are embedded in one another, and policies towards each of them need to include the other two. In line with Walker and Day (2012)'s argument, accounting these three as separate issues may cause to miss the full scope of their implications. With respect to addressing these issues, integrated justice approaches are needed to create policies that are effective and just, addressing the ways these issues are connected to each other. In this respect,

one can conclude that if not approached with care, the potential right to energy could prioritize large-scale energy projects that infringe on vulnerable groups and their well-being. This may result in aggravation of poverty and environmental harm. Policies designed to mitigate this should not solely concentrate on economic and technical solutions. The policies need to address the root causes of the issue. It is also essential to place well-being of the households at the center of the discussions. Also, as indicated by Frigo et al. (2021), both on production and consumption aspects, energy has environmental impacts which has an influence on intergenerational well-being. Hence, the studies on energy poverty needs to account poverty and climate change simultaneously due to their effects over generations.

To sum up, for the first pillar of the discussions, the thesis suggests that the energy justice approach to addressing energy poverty can and should be grounded in a critical political economic analysis. This implies that to comprehend who is deprived of energy access and the reasons behind it, one must thoroughly analyze economic systems, power dynamics, and social relationships, rather than relying solely on technical solutions or policies. For the second pillar of the discussions, the thesis proposes that the right to energy can be considered a proper and effective strategy to address energy poverty and conceptualize it as a justice issue. Securing this right by prioritizing households will not just address the issue as a mere technical problem, but also as a question of justice, highlighting the importance of tackling the social and environmental difficulties faced by households lacking adequate energy.

REFERENCES

AbuQamar, M., Eltayyan, D., Kuznetsova, I., et al. (2023). The impact of access to electricity on mental health in conflict-affected territories: An exploratory study in Gaza. *International Journal of Social Psychiatry, 69*(8), 2148–2156. https://doi.org/10.1177/00207640231194479

Acheampong, A. O., Shahbaz, M., Dzator, J., & Jiao, Z. (2022). Effects of income inequality and governance on energy poverty alleviation: Implications for sustainable development policy. *Utilities Policy, 78*, Article 101399. https://doi.org/10.1016/j.jup.2022.101403

Addison, T., & Roe, A. (2024). *Resources matter: Ending poverty while protecting nature* (Online ed.). Oxford University Press. https://doi.org/10.1093/oso/9780192872197.001.0001

Agnoung Amang, R. E., Keneck-Massil, J., & Tadadjeu, S. (2025). Does state capacity influence energy poverty in developing countries? *Energy, 322*(C). https://doi.org/10.1016/j.energy.2025.135535

Ahlborg, H., Böräng, F., Jagers, S. C., & Söderholm, P. (2015). Provision of electricity to African households: The importance of democracy and institutional quality. *Energy Policy, 87*, 125–135.). https://doi.org/10.1016/j.enpol.2015.09.002

Aklin, M., Bayer, P., Harish, S. P., & Urpelainen, J. (2018). *Escaping the energy poverty trap: When and how governments power the lives of the poor*. MIT Press. https://doi.org/10.1080/13549839.2019.1663802

Anderson, W., White, V., & Finney, A. (2012). Coping with low incomes and cold homes. *Energy Policy, 49*, 40–52.

Aung, M. T., & Boyland, M. (2020). *Ensuring just and equitable energy transitions*. Stockholm Environment Institute. http://www.jstor.org/stable/resrep25054

Baker, E., Carley, S., Castellanos, S., Nock, D., Bozeman III, J. F., Konisky, D., Monyei, C., Shah, M., & Sovacool, B. K. (2023). Metrics for decision-making in energy justice. *Annual Review of Environment and Resources, 48*, 737–760. https://doi.org/10.1146/annurev-environ-112621-063400

Bakker, K. (2007). The "commons" versus the "commodity": Alter-globalization, anti-privatization and the human right to water in the Global South. *Antipode, 39*(3), 430–455. https://doi.org/10.1111/j.1467-8330.2007.00534.x

Barnes, D. F., Khandker, S. R., & Samad, H. A. (2010). Energy access, efficiency, and poverty: How many households are energy poor in Bangladesh? *Policy Research Working Paper Series* No. 5332. The World Bank.

Bartiaux, F., Day, R., & Lahaye, W. (2021). Energy Poverty as a Restriction of Multiple Capabilities: A Systemic Approach for Belgium. Journal of Human Development and Capabilities, 22(2), 270–291. https://doi.org/10.1080/19452829.2021.1887107

Bartl, M. (2010). The Affordability of Energy: How Much Protection for the Vulnerable Consumers? *Journal of Consumer Policy*, 33(3), 225–245. https://doi.org/10.1007/s10603-010-9132-9

Bauman, Z. (1998). *Work, consumerism and the new poor*. Buckingham: Open University Press.

Bazilian, M., Nakhooda, S., & Van de Graaf, T. (2014). Energy governance and poverty. *Energy Research & Social Science*, *1*, 217–225. https://doi.org/10.1016/j.erss.2014.03.006

Bednar, D. J., & Reames, T. G. (2020). Recognition of and response to energy poverty in the United States. *Nature Energy, 5*(5), 432–439. https://doi.org/10.1038/s41560-020-0582-0

Bellamy , B. R., & Diamanti, J. (2018). Materialism and the Critique of Energy. Mediations , 31(2), 1-16. http://www.mediationsjournal.org/articles/critique-of-energy

Bethem, J., Frigo, G., Biswas, S., DesRoches, C. T., & Pasqualetti, M. (2020). Energy decisions within an applied ethics framework: An analysis of five recent controversies. *Energy, Sustainability and Society, 10*(1), 29. https://doi.org/10.1186/s13705-020-00261-6

Besley, T., & Persson, T. (2010). State capacity, conflict, and development. Econometrica, 78(1), 1–34. https://doi.org/10.3982/ECTA8073

Bhattacharya, J., DeLeire, T., Haider, S., & Currie, J. (2003). Heat or eat? Cold-weather shocks and nutrition in poor American families. *American journal of public health*, *93*(7), 1149–1154. https://doi.org/10.2105/ajph.93.7.1149

Boardman, B. (1991) *Fuel Poverty: From Cold Homes to Affordable Warmth*, Belhaven, London

Boardman, B. (2010). *Fixing fuel poverty: Challenges and solutions* (1st ed.). Routledge. https://doi.org/10.4324/9781849774482

Boardman, B. (2012). Fuel poverty synthesis: Lessons learnt; actions needed. *Energy Policy, 49*, 143–148.

Bonatz, N.; Guo, R.; Wu, W.; Liu, L. (2019). A comparative study of the interlinkages between energy poverty and low carbon development in China and Germany by developing an energy poverty index. Energy Build, 183, 817–831. https://doi.org/10.1016/j.enbuild.2018.09.042

Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Routledge & Kegan Paul.

Bouzarovski, S. (2014), Energy poverty in the European Union: landscapes of vulnerability. WENE, 3: 276-289. https://doi.org/10.1002/wene.89

Bouzarovski, S. (2018). Understanding Energy Poverty, Vulnerability and Justice. In: Energy Poverty. Palgrave Macmillan, Cham. https://doi.org/10.1007/978-3-319-69299-9_2

Bouzarovski, S., & Petrova, S. (2015). A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary. *Energy Research & Social Science, 10*, 31–40. https://doi.org/10.1016/j.erss.2015.06.007

Bouzarovski, S., & Simcock, N. (2017). Encountering energy precarity: Geographies of fuel poverty among young adults in the UK. *Transactions of the Institute of British Geographers*, 43(1), 17–30. https://doi.org/10.1111/tran.12120

Bouzarovski, S., & Tirado Herrero, S. (2017). The energy divide: Integrating energy transitions, regional inequalities and poverty trends in the European Union. *European urban and regional studies*, *24*(1), 69–86. https://doi.org/10.1177/0969776415596449

Bouzarovski, S., and S. Petrova. (2015). A global perspective on domestic energy deprivation: Overcoming the energy poverty–fuel poverty binary. Energy Research & Social Science 10:31–40.

Bouzarovski, S., Tirado Herrero, S., Petrova, S., & Frankowski, J. (2020). Low-income energy assistance programs: a critical review. *Local Environment, 25*(1), 35-48. https://doi.org/10.1080/13549839.2019.1685420

Bouzarovski, S.; Thomson, H. (2018) Energy Vulnerability in the Grain of the City: Toward Neighborhood Typologies of Material Deprivation. Ann. Am. Assoc. Geogr. 2018, 108, 695–717.

Bradbrook, A. J., & Gardam, J. G. (2006). Placing the access to energy services within a human rights framework. *Human Rights Quarterly, 28*(1), 389–415.

Bradshaw, J., & Hutton, S. (1983). Social policy options and fuel poverty. *Journal of Economic Psychology, 3*(3-4), 249–266.

Bridge, B.A., Adhikari, D., Fontenla, M., (2016). Household-level effects of electricity on income. Energy Econ. 58, 222–228. https://doi.org/10.1016/j.eneco.2016.06.008.

Brown, H., & Vera-Toscano, E. (2021). Energy poverty and its relationship with health: empirical evidence on the dynamics of energy poverty and poor health in Australia. *SN business & economics*, *1*(10), 139. https://doi.org/10.1007/s43546-021-00149-3

Bruce, S., & Stephenson, S. (2016). *SDG 7 on Sustainable Energy for All: Contributions of international law, policy and governance*. Nairobi: UN Environment Programme.

Brugger, E. C. (2016). Reflections on the moral foundations of the right to energy. In L. Guruswamy (Ed.), *International Energy and Poverty: The emerging contours* (pp. 68–83). Routledge.

Brunner, K.-M., Spitzer, M., & Christanell, A. (2012). Experiencing fuel poverty: Coping strategies of low-income households in Vienna/Austria. *Energy Policy, 49*, 53–59. https://doi.org/10.1016/J.ENPOL.2011.11.076

Buzan, B. (1983). *People, states, and fear: The national security problem in International Relations*. Wheatsheaf Books.

Buzar, S. (2007a). The 'hidden' geographies of energy poverty in post-socialism: Between institutions and households. *Geoforum, 38*(2), 224–240. https://doi.org/10.1016/j.geoforum.2006.02.007

Buzar, S. (2007b). When homes become prisons: The relational spaces of post-socialist energy poverty. *Environment and Planning A, 39*(8), 1908–1925. https://doi.org/10.1068/a38298

CAN Europe. (2021). *Tackling energy poverty through National Energy and Climate Plans: Priority or empty promise?* Climate Action Network Europe. https://caneurope.org/content/uploads/2021/01/Energy-poverty-report-_FInal_December-2020.pdf

Chard, R. (2016). *The struggle to afford adequate energy: different ways of knowing fuel poverty*. [Doctoral Thesis, Lancaster University].

Charlier, D., Legendre, B. (2023). Energy Poverty and Health Pathologies: An Empirical Study on the French Case. In: Bardazzi, R., Pazienza, M.G. (eds) Vulnerable Households in the Energy Transition. Studies in Energy, Resource and Environmental Economics. Springer, Cham. https://doi.org/10.1007/978-3-031-35684-1_4

Cherp, A., & Jewell, J. (2014). The concept of energy security: Beyond the four As. *Energy Policy, 75*, 415–421. https://doi.org/10.1016/j.enpol.2014.09.005

Chesshire, J. (1986). An energy-efficient future: A strategy for the UK. *Energy Policy, 14*(5), 395–412.

Chester, L., & Morris, A. (2011). A new form of energy poverty is the hallmark of liberalised electricity sectors. *Australian Journal of Social Issues, 46*(4), 435–459. https://doi.org/10.1002/j.1839-4655.2011.tb00228.x

Chipango, E. F. (2021). Beyond Utilitarian Economics: A Capability Approach to Energy Poverty and Social Suffering. *Journal of Human Development and Capabilities*, *22*(3), 446–467. https://doi.org/10.1080/19452829.2021.1871594

Cong, S., Nock, D., Qiu, Y. L., Marques, A., Dong, C., Garrett, C., Jiang, C., Li, Z., Lu, X., McNeil, M. A., Parker, C. P., Tang, Y., Ting, M., Tolvett, S., Vásquez, H., Yin, R., Zeng, S., & Zhou, Y. (2022). Unveiling hidden energy poverty using the energy equity gap. *Nature Communications, 13*, 2456. https://doi.org/10.1038/s41467-022-30146-5

Cooke, E. F. A., Hague, S., Tiberti, L., Cockburn, J., & El Lahga, A. R. (2015). Estimating the impact on poverty of Ghana's fuel subsidy reform and a mitigating response. *Journal of Development Effectiveness*, *8*(1), 105–128. https://doi.org/10.1080/19439342.2015.1064148

Copeland, W. R. (1980). Ethical Dimensions Of The Energy Debate: The Place of Equity. *Soundings: An Interdisciplinary Journal*, *63*(2), 159–177. http://www.jstor.org/stable/41178149

Council of Europe. (2025). *The European Committee of Social Rights publishes its review on social rights and cost of living crisis*. Retrieved June 30, 2025, from https://www.coe.int/en/web/european-social-charter/-/the-european-committee-of-social-rights-publishes-its-review-on-social-rights-and-cost-of-living-crisis

Crossley, P. (2019). Renewable energy law: An international assessment. Cambridge University Press. https://doi.org/10.1017/9781316888490

D'Agostino, A. (2010, October 5). *Energy insecurity for ASEAN's BoP: The un-electrified 160 million* [Conference presentation]. Energy Studies Institute-Ministry of Defence Workshop, Singapore.

Daniel, L., Moore, T., Baker, E., Beer, A., Willand, N., Horne, R., & Hamilton, C. (2020). Warm, cool and energy-affordable housing policy solutions for low-income renters. *AHURI Final Report No. 338*. Australian Housing and Urban Research Institute. https://doi.org/10.18408/ahuri-3122801

Day, R., & Walker, G. (2013). Household energy vulnerability as 'assemblage'. In K. Smith (Ed.), *Energy studies: Critical perspectives* (pp. 45–65). Routledge.

De Amorim, W. S., Valduga, I. B., Ribeiro, J. M. P., Williamson, V. G., Krauser, G. E., Magtoto, M. K., & De Andrade, J. B. S. O. (2018). The nexus between water, energy, and food in the context of the global risks: An analysis of the interactions between food, water, and energy security. *Environmental Impact Assessment Review, 72*, 1–11. https://doi.org/10.1016/j.eiar.2018.05.002

del Guayo, Iñigo, and others (eds), *Energy Justice and Energy Law* (Oxford, 2020; online edn, Oxford Academic, 18 June 2020), https://doi.org/10.1093/oso/9780198860754.001.0001

Devine-Wright, P. (2007). Energy citizenship: Psychological aspects of evolution in sustainable energy technologies. In J. Murphy (Ed.), Framing the present, shaping the future: Contemporary governance of sustainable Technologies. Earthscan.

Donnelly, J. (2013). *Universal Human Rights in Theory and Practice* (NED-New edition, 3). Cornell University Press. http://www.jstor.org/stable/10.7591/j.ctt1xx5q2

Duvic-Paoli, L. A. (2021). From aspirational politics to soft law? Exploring the international legal effects of Sustainable Development Goal 7 on affordable and clean energy. *Melbourne Journal of International Law, 22*(1). https://ssrn.com/abstract=3930550

Emre, T., & Sozen, A. (2022). Energy Poverty Clustering by Using Power-cut Job Order Data of the Electricity Distribution Companies. *International Journal of Energy Economics and Policy*, *12*(3), 401–409. https://doi.org/10.32479/ijeep.12961

EPAH. (2022). *Bringing energy poverty research into local practice: Exploring subnational scale analyses*. EPAH, Brussels.

EPAH. (2024). *Energy poverty: Knowledge products and guidance for local action*. European Commission. Retrieved July 2025, from https://energy-poverty.ec.europa.eu

European Commission. (2017). *European Pillar of Social Rights*. https://commission.europa.eu/system/files/2017-11/social-summit-european-pillar-social-rights-booklet_en.pdf

European Commission, EU Energy Poverty Observatory. (2018, July 7). *EU Energy Poverty Observatory*. https://www.energypoverty.eu/

European Commission. (2022). Energy poverty. https://energy.ec.europa.eu/topics/energy-poverty_en

European Commission. (2023). *Energy Efficiency Directive (EU/2023/1791)*. Retrieved from https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en

European Commission. (2023). *Energy Efficiency Directive (EU/2023/1791)*. Retrieved from https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficiency-targets-directive-and-rules/energy-efficiency-directive_en

European Parliament and Council of the European Union. (2009). Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity (Article 3.8). *Official Journal of the European Union, L 211*, 55–93. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32009L0072

European Parliament. (2021, January 21). *European Parliament resolution on access to decent and affordable housing for all (2019/2187(INI))* [Official Journal C 456/145]. https://www.europarl.europa.eu/doceo/document/TA-9-2021-0020_EN.pdf

EPSU. (2025, July 2). *Right to Energy Coalition adopts new strategy paper*. https://www.epsu.org/article/right-energy-coalition-adopts-new-strategy-paper

EPSU. (1999). *Energy sector liberalization and fuel poverty: Ensuring affordable, reliable, and adequate electricity supply for all*. EPSU. https://www.epsu.org/sites/default/files/article/files/Advocacy%20Paper%20-%20Regulated%20Prices%20and%20Energy%20Poverty.pdf

Eurostat. (2022, February 10). Energy prices on the rise in the euro area in 2021. *Products Eurostat News*. https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20220210-2

Fearn, G. (2023). The end of the experiment? The energy crisis, neoliberal energy, and the limits to a socio-ecological fix. *Environment and Planning E: Nature and Space*, *7*(1), 212-233. https://doi.org/10.1177/25148486231172844

Food and Agriculture Organization. (2024). FAO Food Price Index. Retrieved from https://www.fao.org/worldfoodsituation/foodpricesindex/en/

Freling, B. (2012, January 17). *Energy is a human right*. Bob Freling. Retrieved from https://www.bobfreling.com/index.php/2012/01/17/energy-is-a-human-right/

Frigo, G., Baumann, M., & Hillerbrand, R. (2021). Energy and the Good Life: Capabilities as the Foundation of the Right to Access Energy Services. Journal of Human Development and Capabilities, 22(2), 218–248. https://doi.org/10.1080/19452829.2021.1887109

Fuel Poverty Action. (2022). *Energy For All: Our route to energy justice*. https://www.fuelpovertyaction.org.uk/ending-fuel-poverty/energy-for-all/

Galvin, R. and Sunikka-Blank, M. (2018), Economic Inequality and Household Energy Consumption in High-income Countries: A Challenge for Social Science Based Energy Research, Ecological Economics, 153, issue C, p. 78-88, https://EconPapers.repec.org/RePEc:eee:ecolec:v:153:y:2018:i:c:p:78-88.

Garsous, G., & Kozluk, T. (2017). *Foreign direct investment and the pollution haven hypothesis: Evidence from listed firms* (OECD Economics Department Working Papers No. 1379). OECD Publishing. https://doi.org/10.1787/1e8c0031-en

Global Health Rights. (2020). CESCR General Comment No. 15: The right to water. https://www.globalhealthrights.org/instrument/cescr-general-comment-no-15-the-right-to-water/

Gonzalez-Pijuan, I., Ambrose, A., Middlemiss, L., Tirado-Herrero, S., & Tatham, C. (2023). Empowering whose future? A European policy analysis of children in energy poverty. *Energy Research and Social Science, 106*, 103328. https://doi.org/10.1016/j.erss.2023.103328

Grabar Robina, V. K., Židov, B., & Fabek, R. (2022). Measuring and monitoring energy poverty in the EU - Examples of good practices. *EP-pedia*.

Grey, C. N. B., Schmieder-Gaite, T., Jiang, S., Nascimento, C., & Poortinga, W. (2017). Cold homes, fuel poverty and energy efficiency improvements: A longitudinal focus group approach. *Indoor and Built Environment, 26*(7), 902–913. https://doi.org/10.1177/1420326X17703450

Grossmann, K., & Trubina, E. (2021). How the concept of dignity is relevant to the study of energy poverty and energy justice. *Frontiers in Sustainable Cities*, 3, 644231. https://doi.org/10.3389/frsc.2021.644231

Guruswamy, L. (2010). Energy justice and sustainable development. *Colorado Journal of International Environmental Law and Policy, 21*(2), 231. Available at https://scholar.law.colorado.edu/faculty-articles/231.

Guruswamy, L. (2015). The contours of energy justice. In S. Alam, S. Atapattu, C. G. Gonzalez, & J. Razzaque (Eds.), *International Environmental Law and the Global South* (pp. 529–550). Cambridge University Press.

Hall, S. M. (2013). Energy justice and ethical consumption: comparison, synthesis and lesson drawing. *Local Environment*, *18*(4), 422–437. https://doi.org/10.1080/13549839.2012.748730

Hallegatte, S., & Rozenberg, J. (2021). Climate change impacts increase economic inequality: Evidence from a systematic literature review. *Environmental Research Letters*, 16(4), 045001. https://doi.org/10.1088/1748-9326/ad376e

Hancock, R., & Isherwood, B. (1979). *Household expenditure on fuel: Distributional impacts* [Unpublished report]. Department of Health and Social Security.

Harrington, J. (2006). Climate change, human rights, and the right to be cold. *Fordham Environmental Law Review, 18*(3), 512–535. https://ir.lawnet.fordham.edu/elr/vol18/iss3/2

Harrington, J. (2006). Climate change, human rights, and the right to be cold. *Fordham Environmental Law Review, 18*(3), 512–535.

Haule, R. R. (2006). Some reflections on the foundation of human rights – Are human rights an alternative to moral values? In A. von Bogdandy & R. Wolfrum (Eds.), *Max Planck Yearbook of United Nations Law* (Vol. 10, pp. 367–395). Brill Nijhoff.

Healy, J. D. (2003). Excess winter mortality in Europe: A cross country analysis identifying key risk factors. *Journal of Epidemiology & Community Health, 57*(10), 784–789.

Healy, J. D., & Clinch, J. (2004, January). Quantifying the severity of fuel poverty, its relationship with poor housing and reasons for non-investment in energy-saving measures in Ireland. Energy Policy, 32(2), 207–220. https://doi.org/10.1016/s0301-4215(02)00265-3

Herington, M. J., Lant, P. A., Smart, S., Greig, C., & van de Fliert, E. (2017). Defection, recruitment and social change in cooking practices: Energy poverty through a social practice lens. *Energy Research & Social Science, 34*, 272–280. https://doi.org/10.1016/j.erss.2017.09.001

Heffner, G. & Campbell, N. (2011) Evaluating the co-benefits of low-income energy-efficiency programmes, Results of the Dublin Workshop, 27-28 January, Paris, OECD/IEA.

Heffron, R. J., & McCauley, D. (2014). Achieving sustainable supply chains through energy justice. Applied Energy, 123, 435–437. https://doi.org/10.1016/j.apenergy.2013.12.034

Heffron, R. J., Ronne, A., Tomain, J. P., Bradbrook, A., & Talus, K. P. (2018). A treatise for energy law. *Journal of World Energy Law and Business, 11*(1), 34–48. https://doi.org/10.1093/jwelb/jwx039

Heinrich Böll Stiftung. (2022, November 29). *Energy poverty, vulnerability, and human rights in Bosnia and Herzegovina: A historical and contemporary analysis*. Heinrich Böll Stiftung Bosnia and Herzegovina. https://ba.boell.org/en/2022/11/29/energy-poverty-vulnerability-and-human-rights-bih-historical-and-contemporary-analysis

Hernández D. (2015). Sacrifice Along the Energy Continuum: A Call for Energy Justice. *Environmental justice (Print)*, *8*(4), 151–156. https://doi.org/10.1089/env.2015.0015

Hesselman, M. (2022). "Energy, Right to". In *Elgar Encyclopedia of Human Rights*. Cheltenham, UK: Edward Elgar Publishing. https://doi.org/10.4337/9781789903621.energy.right.to

Hesselman, M. (2023). Governing Energy Poverty in the European Union: A Regional and International Human Rights Law Perspective. European Journal of Comparative Law and Governance, 10(3-4), 438-517. https://doi.org/10.1163/22134514-bja10063

Hesselman, M., & Tirado Herrero, S. (Eds.). (2020). *New narratives and actors for citizen-led energy poverty dialogues* (ENGAGER Policy Brief No. 4). ENGAGER.

Hesselman, M., Varo, A., & Laakso, S. (2019). *The right to energy in the European Union* (ENGAGER Policy Brief No. 2). https://www.engager-energy.net/wp-content/uploads/2019/06/ENGAGER-Policy-Brief-No.-2-June-2019-The-Right-to-Energy-in-the-EU.pdf

Hihetah, C., Ó Gallachóir, B., Dunphy, N. P., & Harris, C. (2024). A systematic review of the lived experiences of the energy vulnerable: Where are the research gaps? *Energy Research & Social Science, 114*, 103565. https://doi.org/10.1016/j.erss.2024.103565

Hills, J. (2012). *Getting the measure of fuel poverty: Final report of the fuel poverty review*. Centre for Analysis of Social Exclusion.

https://www.bobfreling.com/index.php/2012/01/17/energy-is-a-human-right/

Huhta, K. (2021). The scope of state sovereignty under article 194(2) TFEU and the evolution of EU competences In the energy sector. International and Comparative Law Quarterly, 70(4), 991–1010. https://doi.org/10.1017/S0020589321000269

Huhta, K. (2023). Conceptualising energy justice in the context of human rights law. *Nordic Journal of Human Rights*, 41(4), 378-392. https://doi.org/10.1080/18918131.2023.2210443

IEA. (2021). What is behind soaring energy prices and what happens next?, IEA, Paris https://www.iea.org/commentaries/what-is-behind-soaring-energy-prices-and-what-happens-next

IEA. (2021). World Energy Outlook 2021. https://iea.blob.core.windows.net/assets/4ed140c1-c3f3-4fd9-acae-789a4e14a23c/WorldEnergyOutlook2021.pdf

IEA. (2023). *World Energy Outlook 2023*. IEA. https://www.iea.org/reports/world-energy-outlook-2023

Illich, I. (1983). *Energy and equity*. The Viking Press.

Intergovernmental Panel on Climate Change. (2023). *Climate change 2023: Synthesis report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee & J. Romero (Eds.)] (184 pp.). IPCC. https://doi.org/10.59327/IPCC/AR6-9789291691647

IAEA. (2005). *Energy indicators for sustainable development: Guidelines and methodologies*.

IEA, International Renewable Energy Agency, United Nations Statistics Division, World Bank, & World Health Organization. (2024). *Tracking SDG7: The energy progress report, 2024*. World Bank. https://www.iea.org/reports/tracking-sdg7-the-energy-progress-report-2024

IEA. (2021). World Energy Outlook 2021. https://www.iea.org/reports/world-energy-outlook-2021

IEA, UNDP, & United Nations Industrial Development Organization. (2010). *Energy poverty: How to make modern energy access universal?* Special early excerpt of the World Energy Outlook 2010 for the United Nations General Assembly on the Millennium Development Goals. https://iea.blob.core.windows.net/assets/fdbdd604-de2c-4977-8a3f-20f93e68e738/HowtoMakeModernEnergyAccessUniversal.pdf

IEA. (2010). *Energy poverty: How to make modern energy access universal?* In *World Energy Outlook 2010*. IEA. https://iea.blob.core.windows.net/assets/1b090169-1c58-4f5d-9451-ee838f6f00e5/weo2010.pdf

IEA. (2019). World energy outlook 2019. IEA. https://www.iea.org/reports/world-energy-outlook-2019

IEA. (2023). *World energy outlook 2023*. IEA. https://www.iea.org/reports/world-energy-outlook-2023

IEA. (2025a). Electricity 2025. https://www.iea.org/reports/electricity-2025

IEA. (2025b). Global energy review 2025. https://www.iea.org/reports/global-energy-review-2025

IRENA. (2023). *Renewable energy statistics 2023*. Abu Dhabi. https://www.irena.org//media/Files/IRENA/Agency/Publication/2023/Jul/IRENA_Renewable_energy_statistics_2023.pdf

Jamal, T., & Hales, R. (2016). Performative justice: New directions in environmental and social justice. *Geoforum, 76*, 176–180. https://doi.org/10.1016/j.geoforum.2016.09.014

Jenkins, K. E. H., McCauley, D., Heffron, R., Stephan, H., & Rehner, R. W. M. (2016). Energy justice: A conceptual review. *Energy Research and Social Science, 11*, 174–182. https://doi.org/10.1016/j.erss.2015.10.004

Jenkins, K., McCauley, D., Heffron, R., & Stephan, H. (2014). Energy justice: A whole systems approach. *Queen's Political Review, 2*(2), 74–87. http://hdl.handle.net/1765/125765

Jenkins, K., Sovacool, B. K., & McCauley, D. (2018). Humanizing sociotechnical transitions through energy justice: An ethical framework for global transformative change. *Energy Policy, 117*, 66–74. https://doi.org/10.1016/j.enpol.2018.02.036

Jessel, S., Sawyer, S., & Hernández, D. (2019). Energy, Poverty, and Health in Climate Change: A Comprehensive Review of an Emerging Literature. *Frontiers in public health*, *7*, 357. https://doi.org/10.3389/fpubh.2019.00357

Jiglau, G., Bouzarovski, S., Dubois, U., Feenstra, M., Gouveia, J. P., Grossmann, K., Guyet, R., Herrero, S. T., Hesselman, M., Robic, S., Sareen, S., Sinea, A., & Thomson, H. (2023). Looking back to look forward: Reflections from networked research on energy poverty. *iScience*, *26*(3), 106083. https://doi.org/10.1016/j.isci.2023.106083

Jiglau, G., Hesselman, M., Dobbins, A., Grossmann, K., Guyet, R., Tirado Herrero, S., & Varo, A. (2024). Energy and the social contract: From "energy consumers" to "people with a right to energy". *Sustainable Development*, 32(1), 1321–1336. https://doi.org/10.1002/sd.2727

Jones, P. (1994). *Rights*. Basingstoke: Palgrave Macmillan.

Karlsson-Vinkhuyzen, S. I. (2010). The United Nations and global energy governance: past challenges, future choices. *Global Change, Peace & Security*, *22*(2), 175–195. https://doi.org/10.1080/14781151003770820

Kerr, N., Gillard, R., & Middlemiss, L. (2019). Politics, problematisation, and policy: A comparative analysis of energy poverty in England, Ireland and France. *Energy and Buildings, 194*, 191–200. https://doi.org/10.1016/j.enbuild.2019.04.002

Klein, N. (2008). *The shock doctrine*. Penguin Books.

Kyprianou, I., Serghides, D., Thomson, H., & Carlucci, S. (2023). Learning from the past: The impacts of economic crises on energy poverty mortality and rural vulnerability. *Energies, 16*(13), 5217. https://doi.org/10.3390/en16135217

Langford, M. (2009). Social rights jurisprudence : emerging trends in international and comparative law. In *Cambridge University Press eBooks*.

Leckie, S. (1992). From housing needs to housing rights. An analysis of the right to adequate housing under international human rights law. New York: International Institute for Environment and Development.

Lee, J., Kim, H., & Byrne, J. (2021). Operationalising Capability Thinking in the Assessment of Energy Poverty Relief Policies: Moving from Compensation-based to Empowerment-focused Policy Strategies. *Journal of Human Development and Capabilities*, *22*(2), 292–315. https://doi.org/10.1080/19452829.2021.1887108

Legendre, B., & Ricci, O. (2015). Measuring fuel poverty in France: Which households are the most fuel vulnerable? Energy Economics, 49, 620–628. https://doi.org/10.1016/j.eneco.2015.01.022

Li, J., Gao, M., Luo, E., Wang, J., & Zhang, X. (2023). How does energy poverty eradication promote common prosperity in China? The role of labor productivity. *Energy Economics, 119*, 106576. https://doi.org/10.1016/j.eneco.2023.106576

Li, K., Lloyd, B., Liang, X.-J., & Wei, Y.-M. (2014). Energy poor or fuel poor: What are the differences? *Energy Policy, 68*, 476–481. https://doi.org/10.1016/j.enpol.2013.11.012

Liddell, C., & Morris, C. (2010). Fuel poverty and human health: A review of recent evidence. *Energy Policy, 38*(6), 2987–2997. https://doi.org/10.1016/j.enpol.2010.01.037

Lister, R. (2021). *Poverty* (2nd ed.). Polity Press. https://www.perlego.com/book/2068093/poverty-pdf

Löfquist, L. (2019). Is there a universal human right to electricity? *The International Journal of Human Rights*, *24*(6), 711–723. https://doi.org/10.1080/13642987.2019.1671355

McHarg, A. (2020). Energy Justice: Understanding the 'Ethical Turn' in Energy Law and Policy. In I. G. del Guayo, D. Lee Zillman, M. F. G. D. Montoya, & J. Juan (Eds.), Energy justice and energy law. Oxford University Press

Maniruzzaman, A. F. M., & Al-Saleem, K. (2025). Renewable energy and energy justice in the Middle East: International human rights, environmental and climate change law and policy perspectives. *The Journal of World Energy Law & Business, 18*(1), jwae021. https://doi.org/10.1093/jwelb/jwae021

Marmot Review Team. (2011). *The health impacts of cold homes and fuel poverty*. Report for Friends of the Earth. https://www.instituteofhealthequity.org/resources-reports/the-health-impacts-of-cold-homes-and-fuel-poverty

Mashhoodi, B., Stead, D., & van Timmeren, A. (2019). Spatial homogeneity and heterogeneity of energy poverty: A neglected dimension. *Annals of GIS, 25*(1), 19–31. https://doi.org/10.1080/19475683.2018.1557253

Melin, A., Day, R., & Jenkins, K. E. H. (2021). Energy Justice and the Capability Approach - Introduction to the Special Issue. *Journal of Human Development and Capabilities*, *22*(2), 185–196. https://doi.org/10.1080/19452829.2021.1909546

Méjean, A., Collins-Sowah, P., Guivarch, C., Piontek, F., Soergel, B., & Taconet, N. (2024). Climate change impacts increase economic inequality: Evidence from a systematic literature review.

Middha, B., & Willand, N. (2023). It's not as easy as 'heat or eat' - Exploring the intersecting vulnerabilities of energy and food in domestic practices in Australia. *Energy Research & Social Science, 105*, Article 102880. https://doi.org/10.1016/j.erss.2023.103288

Middlemiss, L., & Gillard, R. (2015). Fuel poverty from the bottom up: Characterising household energy vulnerability through the lived experience of the fuel poor. *Energy Research & Social Science, 6*, 146–154.

Min, B., O'Keeffe, Z. P., Abidoye, B. O., Gaba, K. M., Monroe, T., Stewart, B. P., Baugh, K., & Sánchez-Andrade Nuño, B. (2024). Lost in the dark: A survey of energy poverty from space. *Joule, 8*(7), 1982–1998. https://doi.org/10.1016/j.joule.2024.05.001

Mitchell, T. (2011). *Carbon democracy: Political power in the age of oil*. Verso Books.

Molfetas, M., & Rasool-Ayub, H. (2024). *The Systemic Shifts Needed for a Just Energy Transition*. New America. http://www.jstor.org/stable/resrep63465

Nelson, T. D. (2004). *Ageism: Stereotyping and prejudice against older persons*. MIT Press.

Ngai, J. S. (2012). Energy as a human right in armed conflict: A question of universal need, survival, and human dignity. *Brooklyn Journal of International Law, 37*(2). Retrieved from https://brooklynworks.brooklaw.edu/bjil/vol37/iss2/6

Nguyen, C. P., & Su, T. D. (2022). The influences of government spending on energy poverty: Evidence from developing countries. *Energy, 238*, Article 121785. https://doi.org/10.1016/j.energy.2021.121785

Ningi, T., Taruvinga, A., Zhou, L., & Ngarava, S. (2021). Household water-energy-food security nexus: Empirical evidence from Hamburg and Melani communities in South Africa. *International Journal of Development and Sustainability, 10*(8), 315–339.

North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press. https://doi.org/10.1017/CBO9780511808678

Novikau, A. (2022). The human security dimension of energy security. Paper presented at the 5 th International Academic Conference on Human Security "Innovation, Research, and Knowledge in the (re)configuration of Human Security," Belgrade, Serbia.

Nussbaum, M. C. (2006). *Frontiers of justice: Disability, nationality, species membership*. The Belknap Press of Harvard University Press.

Nussbaum, M. C., & Sen, A. (Eds.). (1993). *The quality of life*. Oxford University Press.

Nussbaumer, P., Bazilian, M., & Modi, V. (2012). Measuring energy poverty: Focusing on what matters. *Renewable and Sustainable Energy Reviews, 16*(1), 231–243. https://doi.org/10.1016/j.rser.2011.08.019

Nussbaumer, P., Bazilian, M., Modi, V., (2012). Measuring energy poverty: focusing on what matters. Renew. Sustain. Energy Rev. 16, 231–243. https://doi.org/10.1016/j. rser.2011.07.150.

OECD (2018). "Measuring energy poverty and ways to protect vulnerable groups in the European Union", in *Energy Subsidy Reform in the Republic of Moldova: Energy Affordability, Fiscal and Environmental Impacts*, OECD Publishing, Paris, https://doi.org/10.1787/9789264292833-5-en.

OECD. (2014). *New perspectives on the water-energy-food nexus: Forum background note*. Global Forum on Environment, Paris.

OECD. (2024). *OECD Affordable Housing Database - Indicator HC 1.3 ability of households to keep dwelling warm* [PDF report]. OECD. https://webfs.oecd.org/els-com/Affordable_Housing_Database/HC1-3-Ability-of-households-keep-dwelling-warm.pdf

OECD. (2025). Energy prices and subsidies in the Western Balkans: Reforms for a fair and green future (OECD Development Pathways). OECD Publishing. https://doi.org/10.1787/082ea26a-en

Olawuyi, D. S. (2013). Mainstreaming human rights under national and international law: Legal and epistemic questions. *Indonesia Law Review, 3*(3), Article 3. https://doi.org/10.15742/ilrev.v3n3.39

Oldfield, E. (2022, July 7). Corporations vs. consumers: Who is really to blame for climate change? *Global Social Challenges*. https://sites.manchester.ac.uk/global-social-challenges/2022/07/07/corporations-vs-consumers-who-is-really-to-blame-for-climate-change/

Omar, M.D., Hasanujzaman, M. (2021). Multidimensional energy poverty in Bangladesh and its effect on health and education: A multilevel analysis based on household survey data, Energy Policy, Volume 158, https://doi.org/10.1016/j.enpol.2021.112579.

Omorogbe, Y. (2020). Legal dimensions of access to modern energy services in Africa: Lessons from Nigeria, Ghana, and Rwanda. In I. del Guayo, L. Godden, D. N. Zillman, M. F. Montoya, & J. J. González (Eds.), *Energy justice and energy law* (Online ed., pp. [page range if known]). Oxford University Press. https://doi.org/10.1093/oso/9780198860754.003.0019

Pachauri, S., Mueller, A., Kemmler, A., & Spreng, D. (2004). On measuring energy poverty in Indian households. *World Development, 32*(12), 2083–2104. https://doi.org/10.1016/j.worlddev.2004.09.005

Paglialunga, E., Coveri, A., & Zanfei, A. (2022). Climate change and within-country inequality: New evidence from a global perspective. *World Development, 159*, 106030. https://doi.org/10.1016/j.worlddev.2022.106030

Palma, P., & Gouveia, J. P. (2022). *Bringing energy poverty research into local practice: Exploring subnational scale analyses*. Energy Poverty Advisory Hub, European Commission. https://energy-poverty.ec.europa.eu/system/files/2024-07/EPAH_Bringing%20Energy%20Poverty%20Research%20into%20local%20practice_final.pdf

Pelletier, N. (2010). Environmental sustainability as the first principle of distributive justice: Towards an ecological communitarian normative foundation for ecological economics. *Ecological Economics, 69*(10), 1887–1894. https://doi.org/10.1016/j.ecolecon.2010.04.001

Petrova, S. (2018). Encountering energy precarity: Geographies of fuel poverty among young adults in the UK. *Transactions of the Institute of British Geographers, 43*(1), 17–30. https://doi.org/10.1111/tran.12196

Petrova, S. (2018). Energy precarity in South Africa: Material deprivation and social vulnerability. *Energy Research & Social Science*, 44, 227–237. https://doi.org/10.1016/j.erss.2018.05.020

Pogge, T. (Ed.). (2007). *Freedom from poverty as a human right: Who owes what to the very poor?* Oxford University Press.

Pye, S., Dobbins, A., Baffert, C., Brajković, J., Grgurev, I., Miglio, R., & Deane, P (2015). Energy poverty and vulnerable consumers in the energy sector across the EU: analysis of policies and measures. INSIGHT_E consortium.

Quintavalla, A., Kienzl, F., & Samkharadze, I. (2023). The human right to energy: Drawing lessons from the development of the human right to water. *Journal of Human Rights and the Environment*, 14(1), 49–66. https://doi.org/10.4337/jhre.2023.01.03

Rademaekers, K., Yearwood, J., Ferreira, A., Pye, S., Hamil-Ton, I., Agnolucci, P., & Anisimova, N. (2016). *Selecting indicators to measure energy poverty*. European Commission, Directorate-General for Energy.

Rawls, J. (1971). *A theory of justice*. Oxford University Press.

Rowntree, B. S. *Poverty: A study of town life.* Londres: Macmillan. 1901.

Rudge, J., & Gilchrist, R. (2005). Excess winter morbidity among older people at risk of cold homes: a population-based study in a London borough. *Journal of public health (Oxford, England)*, *27*(4), 353–358. https://doi.org/10.1093/pubmed/fdi051

Sagar, A. D. (2005). Alleviating energy poverty for the world's poor. *Energy Policy, 33*(10), 1367–1372. https://doi.org/10.1016/j.enpol.2004.01.001

Sattler, M. L. (2016). Energy for Sustainable Development: The Energy–Poverty–Climate Nexus. InTech. doi: 10.5772/62254

Sdralevich, C., Sab, M. R., Zouhar, M. Y., & Albertin, G. (2014). *Subsidy reform in the Middle East and North Africa: Recent progress and challenges ahead* (IMF Working Paper No. 14/03). International Monetary Fund. https://www.imf.org/external/pubs/ft/dp/2014/1403mcd.pdf

Sen, A. (1979). The Welfare Basis of Real Income Comparisons: A Survey. *Journal of Economic Literature*, *17*(1), 1–45. http://www.jstor.org/stable/2723639

Sen, A. (1992). *Inequality reexamined*. Oxford University Press.

Sen, A. (1993). Capability and well-being. In M. Nussbaum & A. Sen (Eds.), *The quality of life* (Online ed., pp. [page range if known]). Oxford University Press. https://doi.org/10.1093/0198287976.003.0003

Sen, A. (1999). *Development as freedom*. Oxford University Press.

Sen, A. (2013). The ends and means of sustainability. *Journal of Human Development and Capabilities, 14*(1), 6–20. https://doi.org/10.1080/19452829.2013.853090

Shapira, S., Shibli, H., & Teschner, N. (2021). Energy insecurity and community resilience: The experiences of Bedouins in Southern Israel. Geoforum, 124, 1-11. https://doi.org/10.1016/j.envsci.2021.06.006

Shue, H. (1980). *Basic rights: Subsistence, affluence, and U.S. foreign policy*. Princeton University Press.

Siksnelyte-Butkiene, I., Streimikiene, D., Lekavicius, V., & Balezentis, T. (2021). Energy poverty indicators: A systematic literature review and comprehensive analysis of integrity. *Sustainable Cities and Society, 67*, Article 102756. https://doi.org/10.1016/j.scs.2021.102756

Silverman, A. (2018). Energy justice: The intersection of human rights and climate justice. In S. Duyck, S. Jodoin, & A. Johl (Eds.), *Routledge handbook of human rights and climate governance* (p. 251). Routledge. https://doi.org/10.4324/9781315312576

Simcock, N., Frankowski, J., & Bouzarovski, S. (2021). Rendered invisible: Institutional misrecognition and the reproduction of energy poverty. *Geoforum, 124*, 1–9. https://doi.org/10.1016/j.geoforum.2021.01.002

Simcock, N., Thomson, H., Petrova, S., & Bouzarovski, S. (Eds.). (2018). *Energy poverty and vulnerability: A global perspective*. Routledge.

Smil, V. (2017). *Energy and civilization: a history*. Cambridge, Massachusetts, The MIT Press

Smith, K. R., Balakrishnan, K., Butler, C., Chafe, Z., Fairlie, I., Kinney, P., et al. (2012). Chapter 4 – Energy and health. In T. B. Johansson, A. P. Patwardhan, N. Nakicenovic, & L. Gomez-Echeverri (Eds.), *Global energy assessment – Toward a sustainable future* (pp. 255–324). Cambridge University Press; International Institute for Applied Systems Analysis.

Smith, M. L., & Seward, C. (2009). The relational ontology of Amartya Sen's capability approach: Incorporating social and individual causes. *Journal of Human Development and Capabilities, 10*(2), 213–235. https://doi.org/10.1080/19452820902940927

Snell, C., Lambie-Mumford, H., & Thomson, H. (2018). Is there evidence of households making a heat or eat trade off in the UK?. *Journal of Poverty and Social Justice*, *26*(2), 225-243. Retrieved Oct 9, 2024, from https://doi.org/10.1332/175982718X15200701225205

Sovacool, B. K. (2012). The political economy of energy poverty: A review of key challenges. *Energy for Sustainable Development, 16*(3), 272–282. https://doi.org/10.1016/j.esd.2012.05.006

Sovacool, B. K. (2013). *Energy & ethics: Justice and the global energy challenge*. Palgrave Macmillan.

Sovacool, B. K. (2015). Fuel poverty, affordability, and energy justice in England: Policy insights from the Warm Front Program. *Energy, 93*, 361–371. https://doi.org/10.1016/j.energy.2015.09.016

Sovacool, B. K., & Dworkin, M. H. (2014). Global Energy Justice: Problems, Principles, and Practices. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9781107323605

Sovacool, B. K., & Dworkin, M. H. (2015). Energy justice: Conceptual insights and practical applications. Applied Energy, 142, 435–444. https://doi.org/10.1016/j.apenergy.2015.01.002

Sovacool, B. K., Heffron, R. J., McCauley, D., & Goldthau, A. (2016). Energy decisions reframed as justice and ethical concerns. *Nature Energy, 1*(5), 16024. https://doi.org/10.1038/nenergy.2016.24

Sovacool, B. K., Burke, M., Baker, L., Kotikalapudi, C. K., & Wlokas, H. (2017). New frontiers and conceptual frameworks for energy justice. *Energy Policy, 105*, 677–691. https://doi.org/10.1016/j.enpol.2017.03.005

Sovacool, B. K., Heffron, R. J., McCauley, D., & Goldthau, A. (2016). Energy decisions reframed as justice and ethical concerns. *Nature Energy, 1*(5), Article 16024. https://doi.org/10.1038/nenergy.2016.24

Sovacool, B.K., Sidortsov, R.V., & Jones, B.R. (2013). Energy Security, Equality and Justice (1st ed.). Routledge. https://doi.org/10.4324/9780203066348

Stojilovska, A. (2023). Energy poverty and the role of institutions: Exploring procedural energy justice – Ombudsman in focus. *Journal of Environmental Policy & Planning, 25*(2), 169–181. https://doi.org/10.1080/1523908X.2021.1940895

Stojilovska, A., Guyet, R., Mahoney, K., Gouveia, J. P., Castaño-Rosa, R., Živčič, L., Barbosa, R., & Tkalec, T. (2022). Energy poverty and emerging debates: Beyond the traditional triangle of energy poverty drivers. *Energy Policy*, *169*, Article 113181. https://doi.org/10.1016/j.enpol.2022.113181

Stojilovska, A., Yoon, H., & Robert, C. (2021). Out of the margins, into the light: Exploring energy poverty and household coping strategies in Austria, North Macedonia, France, and Spain. *Journal of Energy Research & Social Science, 82*, 102279. https://doi.org/10.1016/j.erss.2021.102279

Taltavull de La Paz, P., Juárez Tárrega, F., Su, Z., & Monllor, P. (2022). Sources of Energy Poverty: A Factor Analysis Approach for Spain. Frontiers in Energy Research, 10, 1-18. https://doi.org/10.3389/fenrg.2022.847845

Tanner, T., & Allouche, J. (2011). Towards a new political economy of climate change and development. *IDS Bulletin, 42*(3), 1–14. https://doi.org/10.1111/j.1759-5436.2011.00217.x

Temper, L., & Del Bene, D. (2016). Transforming knowledge creation for environmental and epistemic justice. *Current Opinion in Environmental Sustainability, 20*, 41–49. https://doi.org/10.1016/j.cosust.2016.05.004

The Council of Europe Development Bank. (2019). *Energy poverty in Europe: How energy efficiency and renewables can help*. CEB Studies, March 2019. https://coebank.org/media/documents/CEB_Study_Energy_Poverty_in_Europe.pdf

Thema, J., & Vondung, F. (2020). *EPOV indicator dashboard: Methodology guidebook*. Wuppertal Institut für Klima, Umwelt, Energie GmbH. Prepared for the EU Energy Poverty Observatory, European Commission.

Thomson, H., Bouzarovski, S., & Snell, C. (2017). Rethinking the measurement of energy poverty in Europe: A critical analysis of indicators and data. *Indoor and Built Environment, 26*(7), 879–901. https://doi.org/10.1177/1420326X17699260

Thomson, H., Snell, C., & Liddell, C. (2016). Fuel poverty in the European Union: a concept in need of definition? *People, Place and Policy, 10*(1), pp. 5-24. https://doi.org/10.3351/ppp.0010.0001.0002

Todd, H., & Zografos, C. (2005). Justice for the environment: Developing a set of indicators of environmental justice for Scotland. *Environmental Values, 14*(4), 483–501. https://doi.org/10.3197/096327105774462692

Tol, R. S. J. (2018). The economic impacts of climate change. Review of Environmental Economics and Policy, 12(1), 4-25. https://doi.org/10.1093/reep/rex027

Townsend, P. (1979). *Poverty in the United Kingdom*. Penguin.

Tully, S. (2006a). The contribution of human rights to universal energy access. *Northwestern Journal of International Human Rights, 4*(3), 518–548.

Tully, S. (2006b). The human right to access electricity. *The Electricity Journal, 19*(3), 30–39. https://doi.org/10.1016/j.tej.2006.02.003

Turner, S. J. (2009). *A substantive environmental right: An examination of the legal obligations of decision-makers towards the environment*. Kluwer Law International.

UN. (2015). Transforming our world: The 2030 Agenda for Sustainable Development. https://sdgs.un.org/2030agenda

UN Special Rapporteur on extreme poverty and human rights. (2020). *The "just transition" in the economic recovery: Eradicating poverty within planetary boundaries* (Report to the General Assembly, A/75/207). United Nations. https://www.ohchr.org/en/calls-for-input/report-just-transition-economic-recovery-eradicating-poverty-within-planetary

UNDP. (2005). *Integrating human rights into energy and environment programming*. United Nations Development Programme. https://www.undp.org/sites/g/files/zskgke326/files/publications/Integrating_Human_Rights_into_Energy_and_Environment_Programming.pdf

UNDP. (2020). Human development report 2020: The next frontier—Human development and the Anthropocene. UNDP. https://hdr.undp.org/sites/default/files/hdr2020.pdf

United Nations Committee on Economic, Social and Cultural Rights. (1991, December 13). *General comment No. 4: The right to adequate housing (art. 11 (1) of the Covenant)* (E/1992/23). https://www.refworld.org/legal/general/cescr/1991/en/53157

UNDP, United Nations Department of Economic and Social Affairs, & World Energy Council. (2005). *World energy assessment: Energy and the challenge of sustainability* (p. 44). United Nations. https://sustainabledevelopment.un.org/content/documents/2420World_Energy_Assessment_Overview_2004_Update.pdf

UNDP. (1994). *Human development report 1994*. Oxford University Press. https://doi.org/10.18356/87e94501-en

UNDP. (2010). *Human development report 2010: The real wealth of nations: Pathways to human development*. Palgrave Macmillan. https://hdr.undp.org/content/human-development-report-2010

UNDP. (2016). *Human development report 2016: Human development for everyone*. UNDP. https://hdr.undp.org/sites/default/files/2016_human_development_report.pdf

United Nations Human Rights Council. (2012). *Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context* (A/HRC/22/46). https://www.ohchr.org/Documents/Issues/Housing/A.HRC.22.46_en.pdf

United Nations General Assembly. (2022). Resolution 76/300: The human right to a clean, healthy and sustainable environment (A/RES/76/300). https://docs.un.org/en/A/RES/77/276

United Nations Statistics Division. (2016). *Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all – SDG indicators*. United Nations.

UN. (1948). *Universal Declaration of Human Rights*, Article 25(1). https://www.un.org/en/about-us/universal-declaration-of-human-rights

UN. (2017, November 25). *Sustainable Development Goals: 17 goals to transform our world. Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all*. http://www.un.org/sustainabledevelopment/energy/

Ürge-Vorsatz, D., & Herrero, S. T. (2012). Building synergies between climate change mitigation and energy poverty alleviation. *Energy Policy, 49*, 83–90. https://doi.org/10.1016/j.enpol.2011.11.093

Varo, A., Jiglau, G., Grossmann, K., & Guyet, R. (2022). Addressing energy poverty through technological and governance innovation. *Energy, Sustainability and Society, 12*, Article 49. https://doi.org/10.1186/s13705-022-00377-x

Veseth, M. A. (2025, March 7). *Political economy*. Encyclopaedia Britannica. Retrieved from https://www.britannica.com/money/political-economy

Walker, G. (2009). Beyond distribution and proximity: Exploring the multiple spatialities of environmental justice. *Antipode, 41*(4), 614–636. https://doi.org/10.1111/j.1467-8330.2009.00691.x

Walker, G. (2013). Inequality, sustainability and capability: Locating justice in social practice. In E. Shove, & N. Spuling (Eds.), Sustainable Practices: Social Theory and Climate Change (pp. 181-196). Routledge. https://www.routledge.com/Sustainable-Practices-Social-Theory-and-Climate-Change/Shove-Spurling/p/book/9781138847156

Walker, G. (2015). The Right to Energy: Meaning, Specification and the Politics of Definition. *L'Europe en Formation*, 378, 26-38. https://doi.org/10.3917/eufor.378.0026

Wang, D., Fang, T., & Wang, X. (2024). Assessing the effect of income inequality on household energy poverty—empirical evidence from China. *Frontiers in Energy Research, 11*, Article 1290904. https://doi.org/10.3389/fenrg.2023.1290904

Wells, C. (2024, April 9). European Court of Human Rights rules on climate change cases. https://www.vaticannews.va/en/world/news/2024-04/european-court-of-human-rights-rules-on-climate-change-cases.html

Wewerinke-Singh, M. (2022). A human rights approach to energy: Realizing the rights of billions within ecological limits. *Review of European, Comparative & International Environmental Law, 31*(1), 16–26. https://doi.org/10.1111/reel.12412

Whyte, K. P. (2017). Indigenous climate change studies: Indigenizing futures, decolonizing the Anthropocene. *English Language Notes, 55*(1–2), 153–162.

Wilkinson, P., Pattenden, S., Armstrong, B., Fletcher, A., Kovats, R. S., Mangtani, P., & McMichael, A. J. (2004). Vulnerability to winter mortality in elderly people in Britain: population based study. *BMJ (Clinical research ed.)*, *329*(7467), 647. https://doi.org/10.1136/bmj.38167.589907.55

Winkler, I. T., & Williams, C. (2017). The sustainable development goals and human rights: A critical early review. *The International Journal of Human Rights, 21*(8), 1023–1028. https://doi.org/10.1080/13642987.2017.1348695

WB. (2017). Sustainable energy for all 2017—Progress toward sustainable energy. World Bank. https://openknowledge.worldbank.org/handle/10986/27526

WB. (2024, December 9). *Poverty, prosperity, and planet report 2024*. https://www.worldbank.org/en/publication/poverty-prosperity-and-planet

World Bank. (2025, June 5). *June 2025 update to global poverty lines* [Fact sheet]. https://www.worldbank.org/en/news/factsheet/2025/06/05/june-2025-update-to-global-poverty-lines

World Food Programme (WFP). (2024). Energy for Food Security. Retrieved from https://www.wfp.org/energy-for-food-security

World Water Assessment Programme. (2014). *World water development report 2014: Water and energy* (Vol. 1). UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000225747

Xiao, Y., Wu, H., Wang, G., & Wang, S. (2021). The Relationship between Energy Poverty and Individual Development: Exploring the Serial Mediating Effects of Learning Behavior and Health Condition. *International journal of environmental research and public health*, *18*(16), 8888. https://doi.org/10.3390/ijerph18168888

Xin, B. G., & Zhang, M. W. (2023). Evolutionary game on international energy trade under the Russia-Ukraine conflict. Energy Econ. 125, 106827.

Zaidan, E., & Antoine Ibrahim, I. (2024). Achieving energy justice: The role of supervisory and compliance mechanisms in global frameworks and the international community. *Energy Strategy Reviews*. Advance online publication. http://dx.doi.org/10.2139/ssrn.5258176

Zheng, J. J., Dang, Y. J., and Assad, U. (2023). Household energy consumption, energy efficiency, and household income–Evidence from China. *Appl. Energy* 353, 122074. doi: 10.1016/j.apenergy.2023.122074

Zwarteveen, M. Z., & Boelens, R. A. (2014). Defining, researching and struggling for water justice: Some conceptual building blocks for research and action. *Water International, 39*(2), 143–158. https://doi.org/10.1080/02508060.2014.891168

APPENDICES

A. TURKISH SUMMARY / TÜRKÇE ÖZET

Enerji, esasında tüm insan faaliyetlerinin temelini oluşturan bir kaynaktır. Yaşamın neredeyse her parçası için gereklidir. Yaygın bir biçimde benimsendiğinin akside, yalnızca fiziksel ve teknik boyutlarla sınırlı değildir. Ekonomik, siyasi ve sosyal ilişkilerde de önemli bir role sahiptir. Tarih boyunca enerji kaynakları üzerindeki mücadele ekonomik ve siyasi yapıları şekillendirmiş, sınıf ve iktidar ilişkilerini etkilemiştir. Bellamy ve Diamanti'nin (2018) de işaret ettiği üzere, enerji kaynaklarının sömürüsü, kapitalist üretim sisteminde ekonomik büyümenin itici güçlerinden biri olarak sayılabilir. Bu çerçevede, enerji iktidar ilişkileriyle doğrudan ilintilidir. Diğer yandan, Russel (1938) ise enerji ile iktidar ilişkileri arasında bir benzerlik kurmuş, enerjinin fizik bilimindeki öneminde olduğu kadar, sosyal bilimlerde de iktidar ilişkilerinin önemli olduğunu ifade etmiştir. Bu tezde ise, enerjinin sosyal bilimler perspektifinden nasıl okunabileceğini, eleştirel siyasi iktisat perspektifiyle nasıl irdelenebileceği, bununla birlikle bir hak olarak enerjiden bahsedilip bahsedilemeyeceğinin değerlendirilmesine yönelik bir girişimde bulunulacaktır.

Sosyal bilimler perspektifinden değerlendirildiğinde ve geniş bir perspektiften bakıldığında, enerji kavramı, kalkınma ve toplumsal refahla bağlantılıdır. Yoksulluk ve eşitsizliklerle de karından bağlı olan bu kavram ayrıca son dönemde iklim değişikliği ve enerji dönüşümü kavramlarıyla da değerlendirilmektedir. Daha yakın bir perspektiften bakıldığında görülebileceği üzere, toplumların refahı üzerine olan etkisi olduğu kadar bireysel refah için de kritik önemi haizdir. Bu çerçevede, enerji gereksinimlerinin hane halkları üzerine etkilerinin değerlendirilmesi elzemdir. Hane halklarının yeterli enerjiye erişemeden, yaşam, sağlık, barınma ve beslenme gibi temel ihtiyaçlarını karşılayamama sorunu literatürde bilhassa 1990'ların başından

itibaren araştırılmakta ve tartışılmaktadır. Bir kavram ve sosyal mesele olarak 1970'lerden bu yana tartışılagelmekte olup bahsekonu tartışmaların ilk olarak dönemin petrol krizi tarafından tetiklendiği söylenebilecektir. Bu çerçevede, Boardman'ın (1991) ortaya koyduğu "yakıt yoksulluğu" (fuel poverty) kavramı bu tartışmaların belkemiğini oluşturmaktadır. Bu kavramın başlattığı, daha sonraları yaygın bir biçimde "enerji yoksulluğu" olarak benimsenen durum temel olarak, hanelerin enerji tüketiminin bedelini ödemeye ekonomik olarak güç yetirememesi olarak ifade edilebilecektir. Avrupa Komisyonu (2022) bu sorunu, hane halklarının yaşamlarını sürdürebilmeleri için gerekli temel enerji maliyetlerini karşılamakta güçlük çekmesi ve bu nedenle yaşam standartlarının olumsuz etkilenmesi olarak tanımlar. Sözkonusu tanımdan anlaşılabileceği üzere, sözkonusu kavramın temelinde esasında, hane halklarının ihtiyaçları ve refahı yatmaktadır. Bu çerçevede, enerji yoksulluğu tartışmalarının teknik ve ekonomik yönleriyle değerlendirmenin yeterli olmayacağı anlaşılmaktadır. Hane halkının refahının ana eksen olduğu bu sorunun içerisinde, temel ihtiyaçlarının karşılanması meselesi merkezde yer almaktadır. Yukarıda anıldığı üzere, temel ihtiyaçlarla olan bağlantısı, hak kavramına işaret eder. Temel ihtiyaçların karşılanmaması hane halklarında ciddi yoksunluklara, bu yoksunlukların da insan hakları ihlallerine yol açtığı görülmektedir. Bilhassa son yıllarda, enerji hakkı kavramı bu çerçevede tartışılmaktadır.

Enerji yoksulluğu kavramının öneminin giderek daha da görünür biçimde tartışıldığı son yıllarda, artan biçimde bu sorunun hafifletilmesine yahut ortadan kaldırılmasına yönelik çalışmalarda da artış yaşanmaktadır. Buna mukabil, enerji yoksulluğunun değil, doğrudan enerjiye erişimin bile küresel biçimde pek de sevimli görünmeyen bir resmi bulunmaktadır. Uluslararası Enerji Ajansı (2024) başta olmak üzere pek çok uluslararası örgüt enerjiye erişimin, dünyanın önemli bir kısmı için kritik bir endişe kaynağı olmaya devam ettiğini kaydetmektedir. IEA ve diğerlerinin (2024) raporu, 2022 yılı itibariyle küresel nüfusun yaklaşık yüzde 91'inin elektriğe erişimi olduğunu ortaya koymaktadır. Sözkonusu istatistik, erişimin yüksek oranda sağlandığını gösterse de geriye kalan yaklaşık yüzde 9'luk kısmın sayısal vahameti gözden kaçmamalıdır. Bu istatistik, yaklaşık 685 milyon kişinin hala elektriğe erişiminin olmadığı anlamına gelmektedir. Dahası, yine anılan raporda belirtildiği üzere, mevcut projeksiyonlar altında, 2030 yılına nüfusun yüzde 8'inin enerjiye

erişimi olmayacağı tahmin edilmektedir. Bu da yaklaşık 660 milyon insana tekabül etmektedir.

Son dönemde ise, COVID-19 pandemisi ve Ukrayna'daki savaş başta olmak üzere jeopolitik çatışmalar ve gerilimlerin de etkisiyle artan enerji fiyatları, hane halkları üzerindeki yükü artırarak enerji yoksulluğunu yoğunlaştırmış, hane halkları üzerindeki bu ağır yük, başta Avrupa'da olmak üzere, enerji yoksulluğu ve hak tartışmalarının veçhesini çeşitlendirmiştir. Rakamlardan sıyrılarak doğrudan hane düzeyine bakmak, bu sorunun anlaşılmasında, bu yolla çözümüne yönelik etkili adımlar atılmasında da katkı sağlayabileceği değerlendirilmektedir. Böylelikle, hane haklarının omzundaki bu yükün ortadan kaldırılmasa bile hafifletilmesine yönelik adımlar atılmasına katkı sağlayabilecektir. Hane hakları üzerindeki yüke yakından bakıldığında, bunun muhtelif olumsuz etkileri gözlemlenmektedir. Bu kapsamda öne çıkan husus, hane haklarının sağlıklı bir yaşam sürdürebilmek için yeterli koşullarının sağlanıp sağlanamadığıdır. Enerji yoksulluğunun sağlıklı bir yaşam sürdürecek araçlara sahip olmamak anlamına geldiği öne sürülebilir. Bu kapsama, yeterlince ısıtılmayan bir evde yaşamaya katlanma zaruriyetinin bir adalet meselesi olduğu ileri sürülebilir.

Böylesi bir bağlamda, bu çalışma, enerji yoksulluğunu eleştirel siyasal iktisat perspektifinden inceleyerek bu soruna ilişkin kapsamlı bir anlayış getirmeyi amaçlamaktadır. Bu yaklaşım, enerji yoksulluğunun köklerini inceleyerek bu sorunu hafifletmeye yönelik uluslararası çabaların neden yetersiz kaldığını araştırmak maksadıyla benimsenmiştir. Bu çerçevede, enerjinin bir hak olarak tanınmasına yönelik literatüre katkı sağlanması amaçlanmaktadır. Bu potansiyel hak, enerji adaleti (energy justice) yaklaşımı, yapabilirlikler yaklaşımı (capabilities theory) ve uygulama teorisi (practice theory) gibi teorik temellerinin yanı sıra hukuki ve etik temelleri açısından da incelenmektedir. Enerji hakkını tartışmak için bu tez, insan hakları hukuku çerçevesinde enerjiye ilişkin mevcut normları ve Birleşmiş Milletler ve Avrupa Birliği'nin domine ettiği uluslararası uygulamaları incelemektedir. Bu potansiyel hakka bir temel oluşturmak üzere, tamamlayıcı hakları, "hakların geçişkenliği (permeability of rights)" ilkesi çerçevesinde ele alınmaktadır. Bu

incelemenin amacı, enerji hakkı ile diğer ilgili haklar arasındaki bağlantıların, enerji hakkı bir teorik temel sağlayıp sağlamadığını incelemektir.

Bu tartışmalar ışığında, enerji yoksulluğunu hafifletme ve enerji hakkını geliştirmeye yönelik çabanın etkileri ve eksikliklerine ilişkin bir tartışma da yer almaktadır. Bu bağlamda, enerji hakkı kavramının, enerji yoksulluğu sorununu ele almaya yönelik bir temel sağlayabileceği öne sürülmektedir. Ayrıca, hak temelli çerçevenin, kâr odaklı çabalara ve verimlilik boyutuna odaklanmak yerine, enerji adaleti ve güç yetirebilmeyi (affordabiliy) öncelikler olarak vurgulayarak, enerji yoksulluğunu hafifletme çabalarına dahil olan aktörler arasında devletin rolünü öne çıkardığı ileri sürmektedir.

B. THESIS PERMISSION FORM / TEZ İZİN FORMU

(Please fill out this form on computer. Double click on the boxes to fill them)

ENSTİTÜ / INSTITUTE

Fen Bilimleri Enstitüsü / Graduate School of Natural and Applied Sciences ☐

Sosyal Bilimler Enstitüsü / Graduate School of Social Sciences ☒

Uygulamalı Matematik Enstitüsü / Graduate School of Applied Mathematics ☐

Enformatik Enstitüsü / Graduate School of Informatics ☐

Deniz Bilimleri Enstitüsü / Graduate School of Marine Sciences ☐

YAZARIN / AUTHOR

Soyadı / Surname : Gülbahar
Adı / Name : Yağmur Gökçe
Bölümü / Department : Siyaset Bilimi ve Kamu Yönetimi / Political Science and Public Administration

TEZİN ADI / TITLE OF THE THESIS (**İngilizce** / English): The mathematical abilities of young children in the context of hemodynamic changes, executive function, home and school environment

TEZİN TÜRÜ / DEGREE: **Yüksek Lisans** / Master ☒ **Doktora** / PhD ☐

1. **Tezin tamamı dünya çapında erişime açılacaktır. /** Release the entire work immediately for access worldwide. ☒
2. **Tez iki yıl süreyle erişime kapalı olacaktır.** / Secure the entire work for patent and/or proprietary purposes for a period of **two years. *** ☐
3. **Tez altı ay süreyle erişime kapalı olacaktır.** / Secure the entire work for period of **six months**. ***** ☐

***** *Enstitü Yönetim Kurulu kararının basılı kopyası tezle birlikte kütüphaneye teslim edilecektir. / A copy of the decision of the Institute Administrative Committee will be delivered to the library together with the printed thesis.*

Yazarın imzası / Signature ..... **Tarih** / Date .....
(Kütüphaneye teslim ettiğiniz tarih. Elle doldurulacaktır.)
(Library submission date. Please fill out by hand.)

Tezin son sayfasıdır. / This is the last page of the thesis/dissertation.