

Masteroppgave

Addressing Energy Poverty: A Critical Examination of the Implementation of Energy Policies in Malawi

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Abstract

Access to energy is fundamental for social, environmental and economic development. Despite several ambitious plans and strategies formulated by the Government of Malawi, only 11 per cent of the population has access to electricity, and the country continues to experience severe energy poverty, despite consistent citizen demand and considerable foreign aid. This thesis aims to identify the reasons why Malawi has not succeeded in addressing energy poverty. The implementation approach, in combination with the Policy Coherence for Sustainable Development (PCSD) approach, is employed to identify the factors contributing to Malawi's energy poverty. The findings reveal that policies in Malawi are typically designed to comply with the conditions of international donors rather than based on the needs of the local population. The country's heavy reliance on foreign aid hinders policy coherence and space for policy development in Malawi, constraining the policy design. Additionally, socioeconomic conditions and significant regional differences result in the population struggling to pay for electricity, even though there is a demand for it. The on-going Mpatamanga hydropower project appears to be a good example of how international donors and private investors can potentially work together to reduce energy poverty in Malawi. The thesis concludes that reducing energy poverty is a complex issue that requires cooperation between the government, international donors, and private-sector investors. The policies developed must be adapted to the needs of the local population in Malawi for successful implementation. The development of affordable, reliable and sustainable modern energy for all will take time because the development is closely linked with the socioeconomic development in Malawi.

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Oslo, May 2023

Mari H. Hansgaard

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Map of Malawi



Figure 1: Map of Malawi (Worldometer, 2020)

Acronyms

EGENCO - Electricity Generation Company Malawi Limited

ESCOM – Electricity Supply Corporation of Malawi Limited

EU – The European Union

GDP – Gross domestic product

GHG – Greenhouse gases

IEA – International Energy Agency

IMF – International Monetary Fund

kWh – Kilowatt-hour (how much energy you are using per hour)

MAREP – Malawi Rural Electrification Programme

MDGs – Millennium Development Goals

MERA – Malawi Energy Regulatory Authority

MGDS – Malawi Growth and Development Strategy

MW – Megawatt (a unit of power equal to one million watts)

NCS – National Charcoal Strategy 2017-2027

Norad – Norwegian Agency for Development Cooperation

Norfund - the Norwegian Investment Fund for developing countries

OECD – Organisation for Economic Cooperation and Development

OPC - Office of the President and Cabinet

PCD - Policy coherence for development

PCED - Policy coherence for environmental development

PIDA – Programme for Infrastructure Development in Africa

PML – Power Market Limited

REP - Rural Electrification Program

SADC - Southern African Development Community

SDGs – Sustainable Development Goals

SDG 7 – Sustainable Development Goal 7

SEforALL – Sustainable Energy for All

UN – The United Nations

UNDP – United Nations Development Programme

WTO – World Trade Organisation

CHAPTER 1: Introduction

Energy lies at the heart of human development. It lights up homes and provides alternatives for cooking, pumping of groundwater, refrigeration of vaccines and many other services that are crucial for achieving a decent standard of living. There is widespread global agreement that energy poverty is a significant obstacle to economic development and has impacts on a broad spectrum of sustainable development indicators, including health, education, food security, gender equality, livelihoods, and poverty reduction (Sovacool & Van De Graaf, 2020, p. 120). Energy poverty is defined as a situation where a person has difficulties in attaining the essential energy in their home to meet basic needs due to a lack of resources or living conditions (Sovacool & Van De Graaf, 2020, p. 121). While energy was evidently missing from the Millennium Development Goals (MDGs), it has been openly integrated into the 2030 Agenda and the accompanying Sustainable Development Goals (SDGs), which were adopted in 2015 by 193 member states of the United Nations (UN). The international concern for improving energy access is operationalised in SDG 7, which aims to “ensure access to affordable, reliable, sustainable and modern energy for all” by 2030 (Sovacool & Van De Graaf, 2020, p. 121).

For the past couple of decades, one of the most important political issues in Malawi has been the lack of adequate energy. Despite huge citizen demand, there is an apparent lack of progress in the reduction of energy poverty (Sustainable Energy for All, 2020). The Government of Malawi acknowledges that energy is a crucial driver for achieving the SDGs as it would increase access to electricity and advance economic activity and economic growth through engagements across many parts of the society (Mwanamvekha, 2020, p. 62). The Government of Malawi’s national plan – the Malawi Growth and Development Strategy III (MGDS) – aims to build a “productive, competitive and resilient nation” (Government of Malawi, 2018b, p. 1). In 2018, the government, moreover, enacted the National Energy Policy to implement a guiding framework for “increased access to affordable, reliable, sustainable, efficient and modern energy for all sectors and every person in the country” (Government of Malawi, 2018a, p. 4).

Despite numerous development challenges, Malawi has been a multi-party democracy since 1994. It holds elections every fifth year and has undergone multiple transfers of power (Freedom House, 2022). Political rights and civil liberties are generally respected by the state

although there is evidence of widespread corruption that permeates the economic and political realms. On Transparency International's "Corruption Perception Index" (2021), Malawi was ranked number 110 out of 180 countries, illustrating huge challenges connected to the fight against corruption (Transparency International, 2021).

As one of the poorest countries in the world, Malawi is ranked 174 out of 189 countries on UNDP's Human Development Index (UNDP, 2022). It is heavily aid-dependent and considered a "donor darling" since 45 per cent of its GDP consists of aid (The Ministry of Finance, 2022). In 2020, the country received USD 1.4 billion in foreign aid and is currently one of the largest recipients of Norwegian aid (in 2021, Malawi received approximately NOK 500 million in long-term aid) (Bolle & Krüger, 2022).

Despite consistent citizen demands, considerable government regulations and high levels of foreign aid, Malawi remains one of the least electrified countries in the world. Around 11 per cent of the population has access to electricity, and only four per cent of the rural population is connected to the grid (Power Market LTD; Government of Malawi, 2022, p. 6). Energy poverty is a crucial public policy concern that interacts with a wide range of other societal challenges, such as income inequality. Energy poverty also cuts across several areas of governance (Butler, 2022, p. 2). Malawi is landlocked and its primary renewable energy sources are solar and wind power. The Government of Malawi aims to enable independent power producers to sell their power to the Electricity Supply Corporation of Malawi (ESCOM) via the national power grid (Mweninguwe, 2022). However, the country and its citizens find themselves continually in a severe energy crisis. This thesis seeks to answer why Malawi has struggled to reduce energy poverty.

Research question:

What characterises energy poverty in Malawi, and why has the country failed to improve access to electricity for its population despite consistent citizen demand and considerable foreign aid?

To answer the main research question, I will focus on the following three sub-questions:

1. *How is the energy sector in Malawi structured and what are the main components of the Government of Malawi's plan to reduce energy poverty?*

2. *What are the main factors behind the lack of access to electricity in Malawi, and how have these factors impacted the country's progress towards achieving SDG 7?*
3. *How does the involvement of aid agencies affect efforts aimed at reducing energy poverty?*

1.2 Background

Almost every day, large parts of Sub-Saharan Africa experience a power crisis due to inadequate, unreliable, and costly electricity infrastructure, which restricts economic growth and development (Shkaratan & Eberhard, 2012, p. 9). Currently, most African countries rely heavily on fossil fuels for their electricity supply, but it has abundant renewable energy sources such as hydro, solar and wind (Akinyemi, et al., 2015, p. 3). However, Africa has the lowest per capita use of modern energy, and demand for energy services is expected to grow rapidly (IEA, 2022a). While producing oil and gas is essential for African economic and social development, renewable energy sources such as solar power can boost the African energy system (ibid). Despite the vast solar resources, only one per cent of the power in Africa is exploited through solar panels (ibid).

In the 19th century, Africa was called the “Dark Continent” because it was vast and unknown to many (Omobowale, 2015, p. 109). In the 21st century, the continent is still comparatively dark due to poor and unreliable power supply (Ebhotu, 2011, p. 409). Inadequate infrastructure, including transmission and distribution networks, is a significant barrier to expanding access to electricity (Kato, 2022). The lack of access to modern technology, research and development investments has also hindered the development of the energy sector on the continent. The poverty rate in Africa remains high, resulting in low demand for electricity and a lack of economic incentives for private companies to invest in the energy sector (KfW Development Bank, 2020, pp. 50-66). Political instability in many African countries has prevented long-term investments in energy infrastructure and created an uncertain business environment that makes it difficult for private companies to invest in the sector. Africa’s energy sector has great potential for export markets, especially in the transition to green energy, but better planning and regulation by governments are needed to unlock this potential and address energy poverty (Akinyemi, et al., 2017).

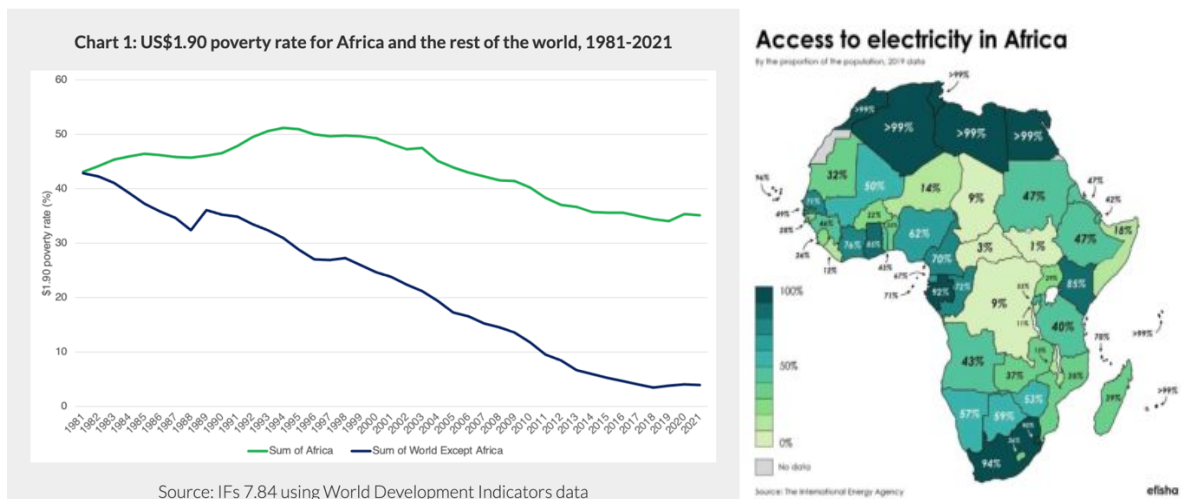


Figure 2: Poverty rate for Africa and the rest of the world, 1981-2021 (The World Bank, 2021). Access to electricity in Africa (IEA, 2022)

There is an acknowledged linkage between energy security and economic development. Nearly 733 million people worldwide are living without access to affordable and clean energy (World Bank, 2022a). At the present rate of development, 670 million people will stay without electricity by 2030. Malawi has the lowest national electrification rate in the Southern African Development Community (SADC), with only 11 per cent of the population having access to electricity (Power Market LTD; Government of Malawi, 2022, p. 6). The rural electrification rate is only four per cent, while the urban rate is 42 per cent (ibid). At the same time, poverty levels remain high and 95 per cent of households rely on traditional firewood and charcoal for cooking (The European Union, 2022, p. 5). The world has been working towards ensuring reliable and clean energy for all since 2015, but the energy access for the population on the African continent remains low.

Reducing energy poverty in a sustainable manner

Energy poverty is defined as a situation where a person has difficulties in obtaining the necessary energy in their home to meet basic needs due to a lack of resources or living conditions (Sovacool & Van De Graaf, 2020, p. 121). Energy security, on the other hand, refers to reliable and affordable access to energy sources for individuals, communities, and nations (Cherp & Jewell, 2014, p. 416). Energy security is achieved when a country or region has a diverse mix of energy sources, resilient infrastructure, and effective energy policies that ensure the continuous and uninterrupted supply of energy. Energy poverty and energy security are two related but distinct concepts. While energy poverty is referring to the lack of

access to energy services, energy security is about ensuring that energy resources are reliable and affordably available to meet the needs of a country or region.

The World Bank's multi-tier framework proposes a nuanced approach to measuring energy access, ranging from tier-1 (lowest level) to tier-5 (highest level) (Ritchie, 2021). The framework was introduced to address the limitations of solely measuring electricity availability when assessing energy access. It provides a more detailed understanding of energy access by considering energy consumption, appliance ownership, and the duration of energy access per day. This approach reveals disparities in access and highlights the need for targeted interventions to achieve universal access to modern energy services (Tenenbaum, et al., 2014). Malawi is classified as a tier-1 country, as illustrated in figure four. This thesis has utilised the definition of energy poverty put forth by Sovacool and Van De Graaf, which delineates it as a situation where a person has difficulties in attaining the essential energy in their home to meet basic needs (2020, p. 121). Using this definition in combination with the multi-tier framework gives a good impression of what it means to live in energy poverty, and how this affects people's everyday life.

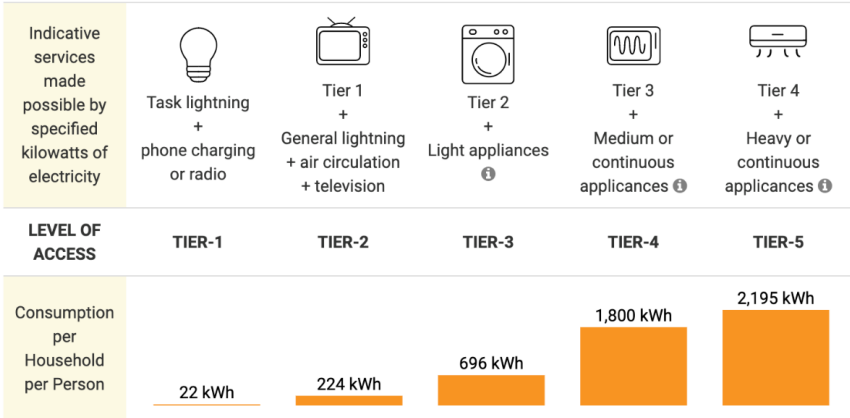


Figure 3: Five tiers of electrification from the World Bank's Electrification Database (World Bank, 2013)

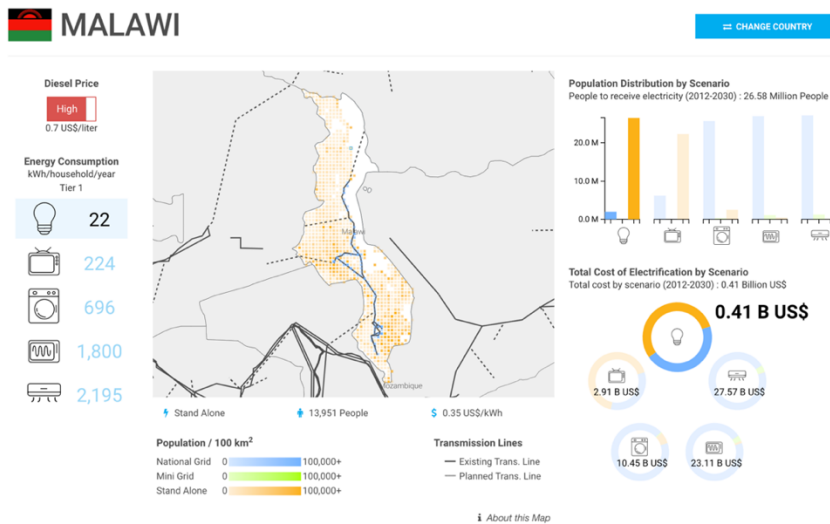


Figure 4: Tier-1 in Malawi (The United Nations, 2021)

Adopted by the UN member states in 2015, the 2030 Agenda aims to address social, economic and environmental challenges and achieve sustainable development through 17 Sustainable Development Goals (SDGs) and 169 targets (Fukuda-Parr, 2016, p. 44). Developing countries, facing significant poverty, inequality and environmental degradation, have embraced the SDGs but encounter challenges, such as limited resources and weak governance structures, requiring partnerships and collaboration (Hick, 2012, p. 293). While the agenda has been lauded as a tool for achieving sustainable development and providing a common language and vision, criticisms include its compatibility with existing frameworks, the need for monitoring and evaluation, and the importance of restructuring the international financial architecture (Mitra, 2021, pp. 43-51) (Henriques, et al., 2021) (Kharas & McArthur, 2015a). Therefore, while the 2030 Agenda has received significant praise for its role in sustainable development, its implementation and compatibility with existing frameworks have been criticised.

The transition to a sustainable energy system is essential for achieving sustainable development, as it offers solutions to major global challenges such as poverty, energy security and climate change (Calzadilla & Mauger, 2018, p. 233). SDG 7 aims to ensure access to affordable, reliable, sustainable and modern energy for all, but achieving this goal requires a multi-stakeholder approach to address financial, technological, social and political barriers (Calzadilla & Mauger, 2018, p. 234). Developing countries face significant challenges in accessing electricity and clean cooking facilities, which hinder the adoption and deployment

of renewable energy technologies (Sovacool & Dworkin, 2015). While renewable energy plays a pivotal role in achieving almost all the SDGs, there are negative social and environmental implications associated with its development. To effectively achieve SDG 7, there is a need for increased investment in renewable energy, innovative financing mechanisms, and addressing social and political barriers, while also considering the potential negative impacts of renewable energy development on communities and the environment (Calzadilla & Mauger, 2018, p. 235).

Agenda 2063, adopted by the African Union in 2013, aims to transform Africa into a prosperous and integrated continent based on democracy, human rights, and social justice (DeGhetto, et al., 2016, p. 94) (African Union, 2021). While sharing similar goals with the global 2030 Agenda, Agenda 2063 focuses on addressing Africa's specific challenges and opportunities. The agenda emphasises the importance of unity and integration of African countries, good governance, peace, and security. However, concerns have been raised about its feasibility and implementation, including the lack of financial and institutional capacity and limited involvement of civil society (Mahama, 2019). Agenda 2063 recognises the critical role of energy in achieving sustainable development with a broader focus on energy as a catalyst for economic transformation and industrialisation (Kamete & Agunbiade, 2018) (Lu, et al., 2018).

1.3 Methods

Introduction

By using a case study, I seek to investigate energy poverty in Malawi. For data collection, I used a combination of descriptive research design, semi-structured interviews, and observation to gather data. The single-case study approach was chosen to provide a detailed understanding of a specific case of energy poverty in Malawi. This approach allowed for the investigation of the factors that led to the outcome and to identify patterns of mechanisms that may not be evident in more typical cases. The descriptive research design was employed to test the causal relationship between variables and energy poverty (Heath & Halperin, 2017, p. 108). Fieldwork was conducted in Malawi in January-February 2023 to gather data and understand the local context. The fieldwork allowed for observations and information gathering from various sources, such as governmental and non-governmental organisations, as well as individuals directly affected by energy poverty. Semi-structured interviews were used

to gather in-depth information from the participants. Overall, the combination of these research methods allowed me to gather a rich and diverse set of data, providing a comprehensive understanding of energy poverty in Malawi.

The case study approach

A case study is a research method that involves a detailed and in-depth investigation of a specific case or group (Crowe, et al., 2011). In a case study, researchers collect data from various sources, including interviews, observations, and documents, and then analyse the data to gain insight into the subject of the case study. Using a case study will allow me to study energy poverty in a natural environment, providing a rich and detailed understanding of the subject. This is a case study of energy poverty in Malawi. A case study can be seen as a puzzle (Seawright & Gerring, 2008, p. 297). In this case, Malawi is seen as an outlier from the norm, and the question we are trying to answer is why (Thomas, 2021, p. 118). Malawi was chosen as a case because it is one of the countries in the world that suffers the most from energy poverty. Using a descriptive approach to the case, I examine the factors that may have caused/prevented certain things from happening.

The goal of a case study is to provide a detailed and comprehensive understanding of a specific case, often through the collection and analysis of multiple sources of data (Crowe, et al., 2011, p. 1). There are several different kinds of case studies, such as the single-case study approach which involves an in-depth examination of a single case, the multiple-case study examining multiple cases that share common characteristics, a longitudinal case study involves the examination of a case over an extended period of time, a comparative case study involves the comparison of different cases, and in a theory-building case study researchers seek to develop a theoretical framework based on the insights gained from examining the case (Seawright & Gerring, 2008). Overall, the case study approach allows for a detailed and nuanced understanding of a particular phenomenon or situation and can be particularly useful in exploring complex and multifaced issues.

One of the main strengths of the case study approach is that it allows researchers to study a subject in great depth and detail, providing a rich and nuanced understanding of the subject (Crowe, et al., 2011, p. 6). This method is particularly useful for studying complex phenomena that cannot be easily studied using other research methods. Additionally, the case study method allows the researcher to study a subject in its natural environment, providing

insights into the subject that may not be possible through other research methods. A weakness of the case study method is that it is often difficult to generalise the findings from a single case to a wider population (Crowe, et al., 2011, p. 7). Because case studies are typically focused on a specific subject or group, it can be difficult to determine whether the findings from a case study are applicable to other subjects or groups. Additionally, the case study method can be time-consuming and expensive, as it often involves collecting data from multiple sources and conducting detailed analyses.

Research design

Descriptive research design is a type of research methodology that is used to describe and analyse a particular phenomenon or situation (Heath & Halperin, 2017, p. 161). The primary objective of descriptive research is to provide a comprehensive and accurate representation of a particular event or situation of a population (ibid). This type of research design does not attempt to manipulate or influence the variables being studied but instead focuses on observing and measuring the variables as they occur naturally (Heath & Halperin, 2017, p. 108). This involves the collection of data through observations, interviews, and the use of analysis to interpret the data. One advantage of descriptive research is that it can provide a detailed and comprehensive understanding of a particular phenomenon or situation, which can help inform policy decisions, program development and strategies (Heath & Halperin, 2017, pp. 127-128). However, a limitation of descriptive research is that it cannot establish a cause-and-effect relationship between variables, as it does not involve the manipulation of variables (Dulock, 1993, p. 155).

This study has applied a descriptive research design to collect data through interviews, fieldwork, and observations. There are a vast number of potentially important variables that may influence energy poverty in Malawi. By taking a descriptive approach and restraining the analysis to interviews, observations, and fieldwork, I tried to secure a broad interference (Heath & Halperin, 2017, p. 163). To secure an even broader interference I could have arranged for longer fieldwork, interacted with additional local actors and spoken to more politicians and international actors. Using a descriptive research design offers some practical and ethical implications. One of the main implications identified is that the research does not have the opportunity to randomly assign subjects to groups and manipulate the independent variable to measure the impact on the dependent variable (Heath & Halperin, 2017, p. 225)

(Dulock, 1993, p. 155). For example, the policy measures taken by the Government of Malawi to reduce energy poverty cannot be randomised.

Conducting field studies and interviews can raise several ethical issues that need to be considered. Some of the most common ethical issues include concerns of informed consent, confidentiality, data protection, and anonymity (Heath & Halperin, 2017, pp. 174-175). For instance, it is important to ensure that the participant's confidentiality is protected and that their personal information is not shared with others without their consent. It is also important to ensure that the researcher is not exploitative, that the benefits outweigh the risks, and that the participants have the right to withdraw from the study at any time. I ensured that the research I conducted was not exploitative and informed the participants about their right to withdraw at any time during the study. Maintaining the anonymity of informants presents an ethical challenge. In qualitative research, particularly in sensitive or vulnerable contexts, the informant's safety needs to be considered carefully. Anonymity is crucial for fostering trust and openness, allowing informants to share personal or sensitive information without fear of negative consequences. Ethical dilemmas may arise when balancing the need for transparency and the duty to protect the informant's anonymity. In this study, due respect is accorded to the preference of informants who wish to maintain anonymity, while explicit consent has been obtained from all identifiable informants, including those to whom the NGO or positions are disclosed. I was aware of cultural sensitivities and ensured that the research was conducted in a proper manner. By taking these steps, I ensured that my research was conducted in an ethical manner and that the rights and well-being of participants were protected.

Fieldwork: Duration and sites

Malawi is a landlocked country located in Southeast Africa (World Bank, 2022b). The population of Malawi is around 20 million, with a majority of the population living in rural areas (ibid). The country is considered one of the poorest in the world, ranking as the eight poorest country globally (Bolle & Krüger, 2022). This is reflected in the high poverty rate, with over half of the population living below the poverty line. The country is heavily dependent on aid from international organisations, with many donors and NGOs actively involved in poverty reduction efforts (FN-Sambandet, 2020). Malawi's economy is primarily based on agriculture, with 76 per cent of the population engaged in small-scale farming, however, this sector is vulnerable to climate change and economic fluctuations (World Bank,

2022b). The lack of economic diversification and infrastructure development has contributed to the country's poverty.

Malawi is a predominantly agricultural country, with most of its population relying on subsistence farming for their livelihoods. In 2019 76 per cent of the population was employed in agriculture (The Global Economy, 2020). However. Many households in the country lack access to basic services such as electricity, which puts a strain on local resources (World Bank, 2022a). This is particularly challenging for rural households, as they are often isolated and lack access to basic services (The United Nations, 2021). Additionally, poverty is widespread in Malawi, with many households unable to afford electricity and relying on traditional energy sources such as charcoal and firewood.

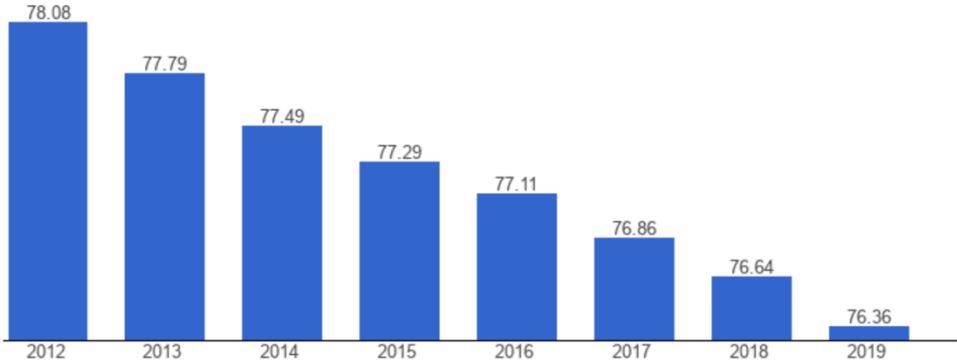


Figure 5: Employment in agriculture (%) in Malawi 2012-2019 (The Global Economy, 2020)

Malawi's energy mix relies on hydropower, which poses a significant challenge to the country's energy affordability. The country experiences frequent power outages due to the unpredictable and insufficient hydropower supply, leading to many households and businesses relying on expensive alternatives such as diesel generators. This reliance on expensive alternatives further perpetuates energy poverty, making electricity inaccessible to a significant proportion of the population. The importance of a diversified energy mix lies in its potential to enhance access to affordable and clean energy, which is crucial for achieving SDG 7. Over-reliance on a single source of energy, such as hydro, poses significant risks to energy security and affordability, particularly in the face of climate change impacts (IEA, 2022a). Diversification enables a more resilient and sustainable energy system by reducing vulnerability to supply shocks, improving energy access and affordability, and mitigating the environmental impact of energy generation (Gozgor & Paramati, 2022). Solar energy, for instance, can offer a clean and decentralises solution to energy poverty, but it cannot be relied

on exclusively without proper storage mechanisms, which is expensive and requires local knowledge.

Source of energy	Capacity
Hydropower	372 MW
Solar power	60 MW
Biomass	18.5 MW
Diesel sources	141.5 MW
<u>Total capacity</u>	532 MW

Table 1: Energy sources and their capacity in Malawi (The European Union, 2022, p. 6).

The Mpatamanga hydropower project

This is a major project in Malawi developed by the Norwegian Agency for Development Cooperation (Norad) and Scatec with support from the World Bank, the African Development Bank and the European Investment Bank, among others (Norfund, 2022b). This project is a relevant example of the involvement of international donors in Malawi and the potential impact they can make in addressing energy issues. However, it is important to note that this case cannot be generalised to all projects initiated by donors, and it is too early to tell whether it will succeed. Nevertheless, the case provides valuable insights into the workings of foreign investors and aid donors when developing projects in Malawi and highlights the need for careful consideration of local priorities and interests in such endeavours. In this study, I refer to this project as a case when discussing the involvement of international donors in Malawi and their effects on reducing energy poverty. The project is a significant milestone in Malawi's renewable energy journey, the 350 MW facility is expected to provide energy during peak demand hours, improve energy security, and reduce energy shortages in the country. It will be located in the Shire River and will consist of a 309 MW peaking plant and a 41 MW downstream plant (ibid). Almost 180,000 jobs are expected to be created and the hydropower project will potentially provide enough clean electricity to meet the equivalent demand of over three million people (Norfund, 2022a). However, it does not address the issue of low grid access in the country, as only eight per cent of the population in Malawi is connected to the national grid.

Scatec is a renewable energy solutions provider, while Norfund – the Norwegian Investment Fund for developing countries - is a development finance institution that invests in businesses operating in developing countries. The project has been developed for several years. The Government of Malawi will own 30 per cent of the project while the rest is shared amongst international companies with Norfund being the majority shareholder owning 55 per cent

(Norfund, 2022b). The Mpatamanga project is a large-scale complex infrastructure development, requiring significant investments of time and resources to be brought to fruition. Technical challenges such as the need for regulatory dams that can control the flow of water and the risk of disrupting the environment and local communities, and the high cost of investments are obstacles that must be carefully addressed. The Malawian government is considered a partner in the project and is expected to take full ownership of the power plant in the future. This makes it necessary to ensure that they have the competence to take over the power plant's operation.

The project is a good example of how climate and development policies can be brought closer together to achieve sustainable development (Norfund, 2022a). This case was identified as important during interviews in Malawi, as it was mentioned by a lot of local and international informants. Since this project has barely started it is not possible to say anything about its effects and results, but it will be used as a base for discussing the impact of international donors on energy poverty in Malawi. This case provides the opportunity to investigate challenges, potential and opportunities. By developing renewable energy sources, emissions can be avoided while increasing energy access and constructing resilience against the consequences of climate change. The Norwegian Minister of International Development, Anne Beathe Tvinning, notes that “through the effective use of public support for the development of renewable energy, we help to avoid emissions and increase energy access” (Oslo, 30.03.23). It remains to be seen whether the project will be a success or not, however, this project poses a good example of how international donors and the local community in Malawi could work together to reduce energy poverty.



Figure 6: The Shire River and Nkula Hydro, Malawi's main hydropower plant. Photo: Private, 2023 and Shirtetimes, 2022

The fieldwork lasted for three weeks – from January 2023 to February 2023. During this time, I visited different locations in the country including the capital city of Lilongwe, and the main commercial city of the country – Blantyre, to gain a comprehensive understanding of the local conditions and how they contribute to energy poverty. The fieldwork involved day trips to rural areas surrounding Blantyre and Lilongwe to understand the circumstances of rural communities. Due to safety concerns and the convenience of conducting interviews in urban areas, overnight stays in rural areas were not feasible. While this approach may have resulted in a greater focus on urban communities, efforts were made to communicate with rural populations extensively and gather their perspectives. By conducting research in Malawi, I was able to gain first-hand knowledge of the challenges facing the country and how they relate to energy poverty.

The capital city of Malawi, Lilongwe, is the political and administrative centre of the country. The city has a population of approximately 1.1 million people and is one of the fastest-growing cities in the country (Visit Malawi, 2022). Despite the city's rapid growth, most residents live in informal settlements and lack access to essential facilities such as electricity and clean water (Un-Habitat, 2011b). This is a significant contributor to energy poverty in the city, as many households are unable to afford electricity and rely on traditional energy sources such as charcoal and firewood (Power Market LTD; Government of Malawi, 2022, p. 21). This puts strain on local resources and contributes to environmental degradation. The local

conditions in Lilongwe make it an important location for studying energy poverty, as it highlights the challenges facing rapidly growing cities in developing countries.

Blantyre is the second-largest city in Malawi, with a population of approximately 1.5 million people (UN-Habitat, 2011a). The city is a major commercial and industrial centre, and its economy is largely based on trade and manufacturing. Despite the city's economic activity, many residents face energy poverty, as they lack access to electricity and rely on traditional energy sources (ibid). This is particularly challenging for low-income households, as they are often unable to afford electricity and rely on traditional energy sources such as charcoal and firewood. The local conditions of Blantyre make it an important location for studying energy poverty, as it highlights the challenges facing urban areas in developing countries and the effects of poverty on the urban population.

Secondary data (literature, official strategies, policy briefs, reports)

Secondary data is information that I have not gathered myself. The secondary data collected in Norway and Malawi for my research include scientific literature, reports, documents, archival data and statistics. To answer my research question, I have used sources from anthropology, economics, and sociology, but mainly from political science. In Malawi, I gained access to reports written by both local and foreign NGOs. National plans, policies and development strategies presented by the government in Malawi will be important data contributions. Reports and strategies written by international organisations such as the World Bank, UN agencies, Sustainable Energy for All, and The International Energy Agency will also be used.

Primary data: Interviews, observations

I conducted 30 semi-structured interviews. Open-ended questions made it easier for the candidates to present their reflections on the issue (Heath & Halperin, 2017, p. 310). During fieldwork, I employed an interview guide, which was modified over time to account for the increasing local knowledge. The questions posed to individual informants varied based on their unique perspectives, experiences, and circumstances. However, three primary topics remained constant across all interviews, namely SDG 7, the challenges encountered related to energy poverty, and the current situation of energy poverty. Each interview lasted for about an hour. Informal conversations with both the rural and urban populations were an important source of information. By establishing contact with local NGOs, I gained access to rural areas

beyond Blantyre and Lilongwe, facilitating the opportunity to engage with rural populations and elicit their perspectives on energy poverty. These conversations provided a more personal and informal perspective on the issue of energy poverty. Insight into people's beliefs, attitudes, opinions, and experiences helped verify what I had been told in my formal interviews. It also provided a profound understanding of the social and cultural context surrounding energy poverty.

The issue of anonymity in research is one that has been widely debated. In this present study, informants were asked whether they wished to remain anonymous or not. The results indicate that Members of Parliament and politicians were more likely to request anonymity, while NGOs and professors were less likely to do so. While the specific NGOs are identified in the thesis, the individual informants associated with them are not named in order to preserve their anonymity. This was deemed more crucial than divulging their identities. However, the scholars who participated in the research provided their consent for their names to be mentioned. In contrast, politicians and Members of Parliament were granted anonymity based on their request. Furthermore, to safeguard the personal safety of participants engaged in informal interviews or representatives from the local community in both urban and rural areas, their identities have not been disclosed. The choice to remain anonymous or not is based on the informant's wish, as well as the issue of personal safety.

My primary data will portray the circumstances under which energy poverty occurs in Malawi as closely as possible. This increases the external validity and the possibility for the generalisation of the findings (Heath & Halperin, 2017, p. 219). Observing how energy poverty affects the local population will ensure unbiased inference about the effect of the measurements to reduce energy poverty taken by the Government of Malawi. At the same time, the interviews and observations will present real-world examples and experiences both at a political and local level. I have included selective photos from the fieldwork to give a sense of what the situation is like on the ground. The fieldwork allows me to draw unbiased and external valid causal inferences about energy poverty in Malawi (Heath & Halperin, 2017, p. 220).

Validity and Reliability

A precise method is important to achieve reliable and as secure conclusions as possible (King, et al., 1994, p. 23). The methodology used should be public and explicitly discussed in research contributions so that the data collection and analysis can be evaluated by others.

Hellevik (2002) explains the requirement for validity and reliability in research as finding the most relevant and reliable data as possible (Hellevik, 2002, p. 102). The sources available and the ability to obtain them are therefore a question of validity. Yin (2003) believes that one of the most important things to do to strengthen validity in a case study is triangulation, either of data, theory, method or between researchers (Yin, 2003, p. 98). I use various sources of information to shed light on different aspects of the topic, something Yin calls “lower portion” triangulation. I also made sure I selected informants representing both the urban and rural population, politicians and international donors, which made the selection sample representative (Heath & Halperin, 2017, p. 287). To ensure that the facts my informants provided me with were correct I asked for sources of their information. This resulted in the informants providing me with documents I could read to confirm that their information was correct.

Two types of validity, internal and external, are often differentiated (King, et al., 1994, p. 25). Good internal validity is achieved when a conclusive determination can be made about the causal relationship between independent and dependent variables. In contrast, achieving good external validity in a case study can be difficult because it involves generalising the population (Heath & Halperin, 2017, p. 192). However, the aim of this study is not to generalise but rather to offer insights into the case of energy poverty in Malawi. Conceptual validity means measuring the concepts intended to be measured (Heath & Halperin, 2017, p. 287). In this study, precise operationalisation of central concepts has been pursued, particularly for the variables used in the implementation model.

High validity presupposes high reliability. Reliability is about how accurate the data collected is; would other researchers come to the same results by following the same procedures (King, et al., 1994, p. 26)? By showing the procedure I have used in data collection and analysis, I ensure that the reliability of researching this thesis is maintained (Heath & Halperin, 2017, p. 193). To strive for good reliability, I used a recording device during all my formal interviews. These recordings were transcribed after the interviews. All informants consented to participate.

Challenges faced during fieldwork

To conduct a field study, a researcher needs reliable contacts. I established a few contacts via email before travelling to Malawi. I found these contacts by reaching out to different local

NGOs based in Lilongwe. These contacts were extremely helpful and served as key informants, providing additional contacts and information. To get in-depth information and to be able to portray the energy situation in the country as closely as possible I relied on these informants providing me with new informants. In general, the people I sought to speak to were open and willing to take the time to talk to me. However, I faced challenges getting in touch with international donors and organisations, such as the UN, UNDP, EU, and the World Bank. These donors have a huge influence on the national energy policies in Malawi and many of my informants referred to them as crucial for the situation in the country.

The language that I used in my interviews was English. Malawi is a multilingual country, where the official language is English, which is used in government, education, and business. However, the majority of the population speaks Chichewa, which is widely used. In most of my interviews, I did not use an interpreter and did not have any problems understanding my informants. In some cases, speaking with people in rural areas I had some challenges understanding their English. I did not use an interpreter, but I was always accompanied by someone speaking Chichewa when visiting these rural areas. Sometimes it was people working in the NGO I was visiting and sometimes it was my driver. Not using a professional interpreter for these informal interviews might have resulted in some misinterpretations, missed information, leading to inaccuracies in the data collected from these informal interviews. Since these interviews were unplanned and informal it was difficult to know when an interpreter would be needed, I therefore, concluded that using people around me as an interpreter at that current moment was the most appropriate thing to do.

Three weeks of fieldwork can be considered a short and challenging time period for several reasons. Firstly, collecting and analysing data in a limited time frame can be challenging, as it may not provide enough time to gather all the material wanted to answer complex research questions. I did manage to speak to a lot of different representatives from local NGOs, state representatives, academics, and local people. Despite the short period of time, I managed to gain an in-depth view of energy poverty based on several different aspects of the local community. Secondly, building relationships with informants and local communities take time. Cultural immersion is crucial for understanding the cultural context of a field site, and three weeks may not be enough time to fully immerse oneself in the community and gain an in-depth understanding of its norms, values, and beliefs. I used a couple of days to visit local villages and speak to rural people. This was to gain insights into the conditions of the rural

society as well as hear their points of view. This broadened my experience and secured the involvement of a broad local perspective. Furthermore, fieldwork can be unpredictable, and unexpected events may arise that require more time to resolve. Three weeks may not allow for the flexibility needed to conduct an in-depth study. There are several reasons why I had to restrict my fieldwork to three weeks. The primary reason is the constraint of time. Limiting the fieldwork for three weeks was a practical and pragmatic decision that allowed me to successfully complete the necessary interviews and still be able to complete my thesis within the deadline.

One of the biggest challenges that I faced during my fieldwork was finding suitable interview participants. When conducting the fieldwork, I wanted to interview individuals, NGOs, international donors and national politicians who were both affected by the issue, but also the ones working on the reduction. However, getting in contact with these individuals proved to be difficult. Some of the people I contacted were hesitant to participate in the study, either because they were not interested or because they did not have the time. To get in contact with relevant informants my supervisor helped me by sharing his contacts with me. I also spoke to other representatives at the University of Oslo with contacts in Malawi. Being able to build on these people's networks was very helpful, especially when wanting to get in contact with politicians and state representatives.

This thesis uses both primary and secondary sources to address the research question. Primary data was collected through semi-structured interviews, informal observation, and direct observations during fieldwork. Additionally, both qualitative and quantitative information was gathered from secondary sources in Malawi and Norway.

1.5 Outline of the thesis

In this study, chapter two will provide an overview of the theoretical framework. This chapter will commence by introducing implementation theory. In order to expand the theoretical perspectives, theories of policy coherence and policy coherence for sustainable development will also be delineated. In chapter three there will be an outline of energy poverty in Malawi with a focus on the sources of energy, power sector governance and governmental plans and strategies to reduce energy poverty. In chapter four there will be a discussion explaining the lack of affordability and access to electricity, the role of foreign aid in reducing energy poverty and finally, a discussion about why the country has failed to reduce energy poverty.

In chapter five the thesis concludes with energy poverty being a complex issue needing cooperation between the Government of Malawi, international donors, and private sector investors to be solved. This development will take time, and the policies developed need to be adapted to the need of the local population in Malawi for implementation to be successful.

CHAPTER 2: Theoretical Framework

2.1 Introduction

The concept of sustainable development holds significant influence in both global and national governance, but its definition and implementation vary depending on the context and has evolved over time. The most recent shift in the discourse of sustainable development can be seen in the transition from the MDGs to the SDGs. The MDGs primarily focused on reducing poverty through economic growth and trade, while the SDGs have a wider scope, addressing social, economic and environmental issues (De Jong & Vijge, 2021, p. 1). Additionally, the SDGs shift the focus from aid to developing countries to partnerships that promote economic growth, trade and environmental sustainability (Fukuda-Parr, 2016, s. 44). In this chapter, I present a theoretical framework that will be applied to the analysis in the subsequent chapters. This framework is essential to understand the context within which the research question is framed and to provide a roadmap for the subsequent analysis. This chapter is structured into three sections. The initial section provides an overview of the implementation approach, which will serve as a theoretical foundation for the analysis. The second part of the chapter delves into an exploration of policy coherence. In the final section, I operationalise the research question, which will provide a clear and concise formulation of the primary inquiry that will guide the empirical investigation.

This chapter intends to establish a firm comprehension of the theoretical foundations that underpin this thesis. Such a comprehension will furnish a sturdy basis for the forthcoming analysis and enhance the operationalisation of the research question. The principal objective of this chapter is to offer a comprehensive summary of the theoretical framework and establish a pertinence to the research question.

2.2 The Implementation Approach

In this thesis, the implementation approach will be used to analyse and interpret empirical findings. More specifically, I will use the approach to analyse what happens in the process after a political decision has been made and investigate what can explain why Malawi has not succeeded in reducing energy poverty. The implementation approach is not a consistent theoretical framework but is characterised by various approaches and analytical frameworks (Hill & Hupe, 2014). Several scholars argue that effective implementation requires a focus on

the processes and practices that link policy goals and outcomes (Hill & Hupe, 2014) (Bardach, 1998) (Pressman & Wildavsky, 1973).

The implementation approach as a separate research field emerged in the early 1970s (Sabatier & Mazmanian, 1981). It emerged due to the large welfare reforms in the United States in the 1960s and 1970s, which were subject to evaluations (Winter, 2012, p. 255). What was the effect of the welfare reforms, and how could they be improved? Most of such reforms found no effect, which was interpreted as something being wrong with the reform and the idea behind it. However, an alternative interpretation that emerged was that the reform perhaps was not implemented as intended, which led to an interest in studying the relationship between planned and actual interventions (ibid). Pressman and Wildavsky's (1973) study "Implementation, how great expectations in Washington are dashed in Oakland" analysed the reasons why public measures did not reach their goals often was due to not being implemented as intended, paving the way for growth in implementation studies (Pressman & Wildavsky, 1973). Since then, the implementation approach has developed into a large research area. However, there is no general implementation theory, the field has instead been characterised by many different approaches (Sabatier & Mazmanian, 1981, p. 63).

Recent contributions to the field of implementation studies include Stone (2012), Hogan and Vickers (2016), Howlett (2018) and Sabatier, Weible and McQueen (2015). Stone (2012) highlights the political nature of implementation, shaped by the interests, values and power dynamics of various actors (Stone, 2012). His approach emphasises the importance of managing policy paradoxes and recognising conflicts between competing objectives and values during implementation. Hogan and Vickers (2016) argue that effective implementation requires a strategic and adaptive approach that responds to shifting political and institutional contexts, emphasising trust-building, collaboration, communication and leadership (Hogan & Vickers, 2016). Howlett (2018) emphasises the importance of careful consideration during the policy design phase, with clear objectives, stakeholder engagement, and appropriate policy instrument selection (Howlett, 2018). His approach advocates for a flexible and adaptive implementation approach to facilitate learning and adjustment over time. Sabatier, Weible and McQueen (2015) argue that successful implementation requires the coordination of multiple actors with competing interests and values, emphasising the importance of building and maintaining coalitions to support policy change and recognising and managing policy

subsystems, networks of actors who work together to influence policy outcome (Sabatier, et al., 2015).

Several notable scholars who have examined the issue of policy implementation in the African context include Van de Walle (1999), Olowu (2010), Kagwanja (2014) and Hulme and Turner (2018). Van de Walle (2001) argues that many African countries suffer from a cycle of policy implementation failure due to a combination of factors, including weak state institutions, corruption, and inadequate resources (Van de Walle, 2001). He suggests that these challenges have led to a pattern of “policy instability” in which policy implementation efforts are repeatedly disrupted, leading to ineffective governance and persistent underdevelopment in many African countries. Olowu (2010) notes that there is often a gap between policy formulation and implementation due to factors such as corruption, lack of resources, and inadequate institutional capacity (Olowu, 2010). He emphasises the need for a participatory and collaborative approach to policy implementation that involves multiple stakeholders, including civil society organisations and local communities (ibid). Kagwanja (2014) argues that while there has been progress in establishing democratic institutions in Africa, the implementation of policies is still a challenge due to a lack of capacity, corruption and a weak civil society (Kagwanja, 2014). Strengthening democratic institutions, building capacity and empowering civil society are mentioned as important for improving policy implementation in Africa. Hulme and Turner (2018) argue that traditional approaches to policy implementation in Africa have been ineffective and unstable (Hulme & Turner, 2018). They suggest that policy implementation in Africa needs to be more context-specific and include a greater focus on local ownership and participation. Additionally, they argue that policy implementation needs to address power imbalances and inequalities that are often perpetuated by development initiatives.

What is meant by implementation has significance for when the implementation process starts and ends. The two main approaches within the implementation approach disagree on which phases should be included in the implementation. According to Kjellberg and Reitan (1995, p. 32), implementation is both to carry out and realise public policy. They see the implementation of a measure as consisting of seven different phases (ibid):

Phase	Carry out public policy	Realise public policy
1	Policy formation	The investigation by public committees or working groups. Preparation of proposition or equivalent
2	Decision on the measure	Legislative act of equivalent.
3	Specification, central level	Guidelines/regulations
4	Specification, local level	Guidelines/regulations
5	Local implementation	Activity by local entities
6	Implementation practice	Results of the measure
7	Feedback of experience	Adaptation

Table 2: (Kjellberg & Reitan, 1995, p.32)

Different views on which phases should be included in an implementation study form the basis for the distinction between the top-down approach and the bottom-up approaches (Sabatier, 1986, p. 22). Is policy development completed when implementation begins, or is the implementation a phase part of the policy development? The first perspective underpins the top-down approach, which argues that it is only interesting to look at the phases between a central decision on a measure and its local implementation (Kjellberg & Reitan, 1995, p. 139). Here, they see the lack of implementation as a failure to achieve goals, not as the failure of political proposals to be adopted. On the other hand, proponents of the bottom-up approach see the implementation phase as part of policy development. They understand the implementation process as a continuous process, where adaptation to reality and feedback affect implementation (Kjellberg & Reitan, 1995, p. 133). Thus, they believe that maintaining an artificial separation between policy and administration is unnecessary and are therefore concerned with all the phases identified by Kjellberg and Reitan (1995, p. 135).

Two main approaches - Top-down and bottom-up

Top-down approaches focus on how decision-making bodies impose policy implementation on lower-level organisations (Matland, 1995). Some classic works in this field include Pressman and Wildavsky (1973), Van Meter and Van Horn (1975), and Mazmanian and Sabatier (1980). Within this approach, implementation is viewed as designing tools that can achieve a given objective. This means that plans made at the national level should be implemented by local communities without affecting the content of the plans. Thus, local communities are merely a tool for the state to achieve these goals. Implementation is dependent on all links in the chain of command collaborating, and many points in this chain complicate implementation and reduce the likelihood of 100 per cent attainment (Kjellberg & Reitan, 1995, p. 140). This approach emphasises the need for clarity in the policy to be

implemented, and implementation studies examine what enables or impedes goal achievement. Successful implementation here means that local outcomes and measures are realised in accordance with the objectives and framework given from central authorities.

The bottom-up approach emerged as a reaction to the top-down approach, where supporters criticised the latter of their desire for control and unrealistic assumptions (Kjellberg & Reitan, 1995, p. 153). They questioned whether everything can be controlled from a central level or if the society, where the policy is implemented, will affect the control. The top-down approach is also criticized for not taking into account that implementers operate in a space where rules and routines must be adapted to local conditions, and where judgement is often needed. Instead, the bottom-up approach focuses on the informal processes. Influential scholars in this field include Elmore (1980), Hanf, Hjern and Porter (1978) and Barrett and Hill (1984).

In this approach, the focus is less on whether the goal of the measure is achieved and more on whether the problem that the measure is intended to solve is actually solved (Winter, 2012, p. 256). Successful implementation is thus perceived as a correlation between the desired change and the actual results of the measure. This approach allows for movement from local actors to policy-making elites in the public and private sectors (Hjern & Hull, 1982). One benefit is the focus on central actors who develop and implement programs that address local factors. However, the approach has been criticised for potentially hindering elected representatives from exercising their policies. It defines the challenges to accomplishing goals rather than providing implementation advice. Adaptability is important for strategies to adjust to local differences and conditions (Matland, 1995). The bottom-up approach believes that there is a greater chance of achieving the desired change if local level bureaucrats who implement the measure are given the opportunity to use their judgement rather than being controlled from above (Kjellberg & Reitan, 1995, p. 153). The focus is therefore on the lower levels of the implementation process, where the implementation of the measure meets the behaviour, it is intended to change. More emphasis is placed on negotiations and compromises to achieve a customised implementation (Kjellberg & Reitan, 1995, p. 163).

Top-down implementation involves central government agencies and institutions leading the implementation process, while bottom-up implementation involves local actors and communities taking the lead in implementing policies. When it comes to addressing energy poverty, both top-down and bottom-up approaches are important. Top-down approaches can

help ensure that there is a coordinated national strategy for improving energy access and reducing energy poverty, with clear targets, timelines, and accountability mechanisms (Morales, 2018). This can involve policies such as renewable energy targets, subsidies for energy-efficient technologies, and regulations to promote clean energy. Bottom-up approaches can complement these policies by involving communities and local actors in the implementation process. This can involve initiatives such as community-led renewable energy projects, energy cooperatives, and social entrepreneurship for energy access (Matland, 1995). By using a combination of both approaches, policymakers can involve both central decision-makers and local actors in policy implementation, leading to more effective outcomes.

Sabatier (1986) argues that both approaches have their strengths and weaknesses and suggests a synthesis of the two approaches to improve implementation research. He proposes a “synthesises implementation theory” that takes into account the interactions between top-down and bottom-up factors and the role of context implementation (Sabatier, 1986). Sabatier argues that the traditional top-down approach tends to prioritise centralised decision-making and implementation, while the bottom-up approach prioritises the participation of local actors in implementation. However, he notes that these two approaches are not necessarily mutually exclusive and that a more integrated approach is needed. The combined approach proposed by Sabatier involves analysing the interaction between top-down and bottom-up factors and how they influence implementation outcomes. This approach involves identifying key variables that are likely to influence implementation outcomes and developing strategies to address them. Sabatier suggests that a more integrated approach is necessary because implementation is not simply a matter of applying policy decisions from the top-down, nor is it solely a matter of grassroots participation from the bottom-up. Instead, a more nuanced approach is needed that recognises the complex and dynamic interplay between these two perspectives.

Several scholars support Sabatier’s application of a combined approach. Berman and McLaughlin (1978) argue that successful implementation requires a balance between top-down imposition of policy goals and bottom-up participation of local actors (Berman & McLaughlin, 1974). Pressman and Wildavsky (1973) suggest that implementation is a “mixed-scanning” process that involves both top-down and bottom-up elements (Pressman & Wildavsky, 1973). Mazmanian and Sabatier (1981) propose a “stages model” of the policy process that integrated both perspectives (Sabatier & Mazmanian, 1981). They argue that

successful implementation requires a multi-stage process that involves both the top-down imposition of policy goals and the bottom-up participation of local actors.

Implementation is both to carry out and realise public policy (Kjellberg & Reitan, 1995, p. 32). Understanding the various stages of implementation is essential for pinpointing where the process may encounter obstacles and for devising strategies to enhance implementation outcomes. While top-down and bottom-up approaches contribute to the comprehension of policy formation and initial implementation expectations, they do not delve into the intricacies of the implementation process itself or the challenges encountered. To identify potential barriers to implementation Matland's ambiguity and conflict model and Winter's implementation model will be used. Matland centres on two critical aspects: the clarity of goals and means, and the level of conflict surrounding policy content (Matland, 1995, p. 153). By assessing these factors, the model enables the identification of elements that may contribute to policy implementation failures. Complementing Matland's model, Winter's implementation model delves deeper into the complexities of policy implementation by emphasising the influence of institutions and the context-specific nature of the implementation (Winter & Nielsen, 2008, p. 19). Matland's model will allow for an exploration of the clarity of policy goals and means, as well as the presence of conflicts surrounding policy content. Winter's model will further enrich the analysis by incorporating the institutional and context-specific factors that influence implementation, while also considering the different stages of implementation. Together, these models may identify potential barriers to implementation.

Matland's Ambiguity and Conflict Model

Matland's ambiguity and conflict model provides a framework for understanding how policy ambiguity and conflict can influence implementation outcomes (Matland, 1995). The model suggests that failure to effectively address ambiguity and conflict may lead to implementation failures. Ambiguity denotes situations where policy goals or procedures are unclear, whereas conflict refers to situations where stakeholders have competing interests or goals. The model can be useful for understanding how ambiguity and conflict may emerge due to the complex and multifaced nature of the SDGs. The model provides a starting point to identify potential sources of ambiguity and conflict and develop strategies to manage them. Matland's model is premised on the notion that implementation is context dependent. It combines the top-down and bottom-up approaches and highlights that public policy implementation occurs in both

ways (Matland, 1995, p. 153). The model is based on the clarity of policy goals and means and the level of conflict regarding policy content. Ambiguity can apply to both the goals and means of a policy and may affect the implementation process in numerous ways (Matland, 1995, p. 159). Matland outlines which main principles are expected to have the greatest impact on the implementation outcomes.

	Low level of conflict	High level of conflict
Low ambiguity	<u>Administrative implementation</u> <ul style="list-style-type: none"> - Goals: clear, no conflict between the goals - Rational, top-down 	<u>Political implementation</u> <ul style="list-style-type: none"> - Goals: clear, but in conflict with other goals - Top-down
High ambiguity	<u>Experimental implementation</u> <ul style="list-style-type: none"> - Goals: unclear, but little conflict - Implementation locally driven and bottom-up 	<u>Symbolic implementation</u> <ul style="list-style-type: none"> - Goals: unclear, in conflict with other goals - Bottom-up, but top-down political influence will occur because of the level of conflict

Table 3: The ambiguity and conflict model (Matland, 1995)

Matland (1995) identifies four types of implementations: administrative, political, experimental, and symbolic. Administrative implementation involves clear goals and means with minimal conflict and emphasises resource allocation for achieving the desired outcome, which is ideal for a top-down approach (Matland, 1995, p. 160). Political implementation involves clear goals and means but a high degree of conflict, with outcomes determined by power dynamics and negotiation (Matland, 1995, p. 163). Experimental implementation involves ambiguous goals and means but little conflict, with outcomes determined by the local context and activate involvement of actors at the lower levels of the organisation, resembling a bottom-up approach (Matland, 1995, p. 165). Symbolic implementation involves a high degree of ambiguity and conflict, with symbolic measures used to affirm goals or values, and outcomes determined by coalition strengths (Matland, 1995, p. 168).

Winter's implementation model

Winter's implementation model provides a comprehensive framework for understanding the implementation process. It proposes that implementation is a dynamic process that involves multiple stages, including agenda setting, policy formulation, adoption, implementation, and

evaluation. Each stage is influenced by a range of factors, including policy environment, institutional arrangements, and stakeholder interests (Winter & Nielsen, 2008, p. 19). Winter and Nielsen (2008) emphasise the importance of context in implementation, arguing that implementation is influenced by the specific institutional and political context in which it takes place (Winter & Nielsen, 2008, p. 22). They suggest that understanding the institutional and political context is critical for developing effective implementation strategies. Winter's model can be useful when understanding the implementation process and identifying potential implementation challenges. For instance, the model can be useful to identify potential barriers to implementation at different stages of the process and develop strategies to address them.

Winter argues that is a utopian goal to look for a single implementation theory, and that we should instead look for partial rather than general implementation theories (Hill & Hupe, 2014, p. 80). Winter's implementation model is an attempt to integrate the most important and promising variables in implementation research into an analytical framework, drawing on theoretical elements from both the main approaches within implementation literature (Winter, 2012, p. 257). It is important to note that the model, rather than being a strict casual model, is seen as an analytical framework that presents some central factors and mechanisms that affect the results of implementation (Winter & Nielsen, 2008, p. 22).

Critique of the implementation approach

The implementation approach primarily focused on the technical aspects of policy implementation, such as the techniques and strategies employed to achieve policy objectives, while disregarding broader social, economic, and political factors that can influence policy outcomes (Howlett, 2019, p. 406). This approach relies on a linear model that assumes policies are implemented in a straightforward and predictable manner, even though policy implementation can be complex and unpredictable, involving multiple actors with competing interests (Sutton, 1999, p. 22). Furthermore, the implementation approach tends to underestimate the role of context, including the influence of cultural, institutional, and historical factors, which can impede policymakers' comprehension of the specific challenges of implementing policies in diverse contexts (Najam, 1995, p. 2). Additionally, power dynamics and political interests, which affect policy implementation, are often overlooked in the implementation approach, leading to policies being implemented in ways that benefit certain groups at the expense of others, or neglecting the root cause of social problems (Howlett, 2019, p. 410). To address the limitations of the implementation approach, theories

of policy coherence will be used to ensure that policies related to energy poverty are aligned with other policies.

Policy coherence for implementation

The successful implementation of Agenda 2063, the 2030 Agenda and SDG 7 require policy coherence and effective implementation, which can be challenging due to the need to align policies and strategies across different sectors and levels of government. This requires strong institutional frameworks, coordination mechanisms, resources, and stakeholder engagement to ensure policies are informed by diverse perspectives (OECD, 2005, p. 120). The Organisation for Economic Cooperation and Development (OECD) introduced Policy Coherence for Development (PCD) to promote a shared understanding of policies across institutions, and Policy Coherence for Sustainable Development (PCSD) was developed to incorporate sustainability (Häbel & Hakala, 2021, p. 633). Achieving policy coherence on an international level is essential to ensure common objectives. Collaboration and recognition of unintended negative consequences of policies are important to manage trade-offs through the SDGs (Le Blanc, 2015). Although the 2030 Agenda does not offer specific guidance on ensuring integrated and coherent implementation of the SDGs, effective implementation remains a significant challenge. According to OECD (2018), implementing the SDGs typically presents three significant challenges: integration, alignment, and fragmented policy actions (OECD, 2018). Policy coherence is crucial for integration, ensuring that progress towards one SDG also contributed to others.

There are several critics of theories of policy coherence. Some critics argue that achieving policy coherence may be difficult in practice because different departments and agencies often have conflicting interests (Sianes, 2013, p. 136). For instance, the interests of the Ministry of Finance may conflict with those of the Ministry of Environment. Others argue that the lack of clear accountability mechanisms for policy coherence can make it challenging to enforce (Nilsson, et al., 2012, p. 397). It is argued that it is difficult to hold governments accountable for achieving policy coherence, particularly in international contexts where there may be multiple actors involved. It is also argued that policy coherence is framed within a neoliberal agenda, which prioritises economic growth and market-oriented policies over social and environmental concerns (Shawoo, et al., 2022, p. 7). This bias can lead to policies that are not truly coherent, as they do not consider the full range of development objectives. Critics also argue that policy coherence often fails to account for the needs and perspectives

of marginalised communities, who may be disproportionately affected by development policies (OECD, 2005, p. 121). Achieving true policy coherence required an inclusive approach that engages all stakeholders in the policy-making process.

On the other hand, policy coherence encourages better coordination among government departments and agencies, helping to ensure that policies are aligned and mutually reinforcing (Sianes, 2013, p. 141). This can lead to more effective policy implementation and outcomes. Policy coherence can help to ensure that resources are allocated in a more efficient and effective manner (Häbel & Hakala, 2021, p. 634). By avoiding duplication and ensuring that policies are complementary, policy coherence can help to maximize the impact of limited resources. PCSD can help to ensure that development policies are mutually reinforcing and that they support broader sustainable development objectives (OECD, 2005, p. 122). Policy coherence can also help improve governance by promoting greater transparency, accountability, and participation in the policy-making process (Nilsson, et al., 2012, p. 395). By engaging all stakeholders in the policy-making process, policy coherence can help to ensure that policies are more receptive to the needs and priorities of citizens.

Despite the limitations of the implementation approach, a useful theoretical framework for comprehending the intricacies of policy implementation and recognising potential strategies to improve policy outcomes is provided (Cerna, 2013, p. 17). Policy coherence, which encompasses the alignment of policies across different sectors, is crucial not only during the creation of policy but also throughout its execution and evaluation (Howlett, 2019, p. 406). By incorporating policy coherence as a key component of the implementation process, policymakers can enhance and complement existing approaches. Neglecting policy coherence can result in conflicting policies and suboptimal outcomes. To ensure sustainable development, policymakers must take a coherent approach towards policy implementation, which can positively impact the economy, society, and environment. Therefore, viewing the implementation approach in response to policy coherence will enhance effective policy outcomes.

2.3 Operationalisation of problem statement

One of the main challenges in implementing the SDGs and achieving SDG 7 is the lack of policy coherence, both within countries and between different actors and sectors (Sabatier & Mazmanian, 1981, p. 63). This lack of coherence can lead to conflicting policies and actions,

which may hinder progress towards SDG 7. Therefore, it is crucial to examine the implementation of SDG 7 and policy coherence together to identify potential barriers and suggest ways to improve coherence and coordination among stakeholders. A combination of the implementation approach and PCSD is important when studying SDG 7 in Malawi because it can provide a comprehensive understanding of the challenges and opportunities in reducing energy poverty in the country. The implementation approach can help to identify potential barriers to effective policy implementation, while PCSD can help to ensure that policies across different domains are consistent and aligned with each other.

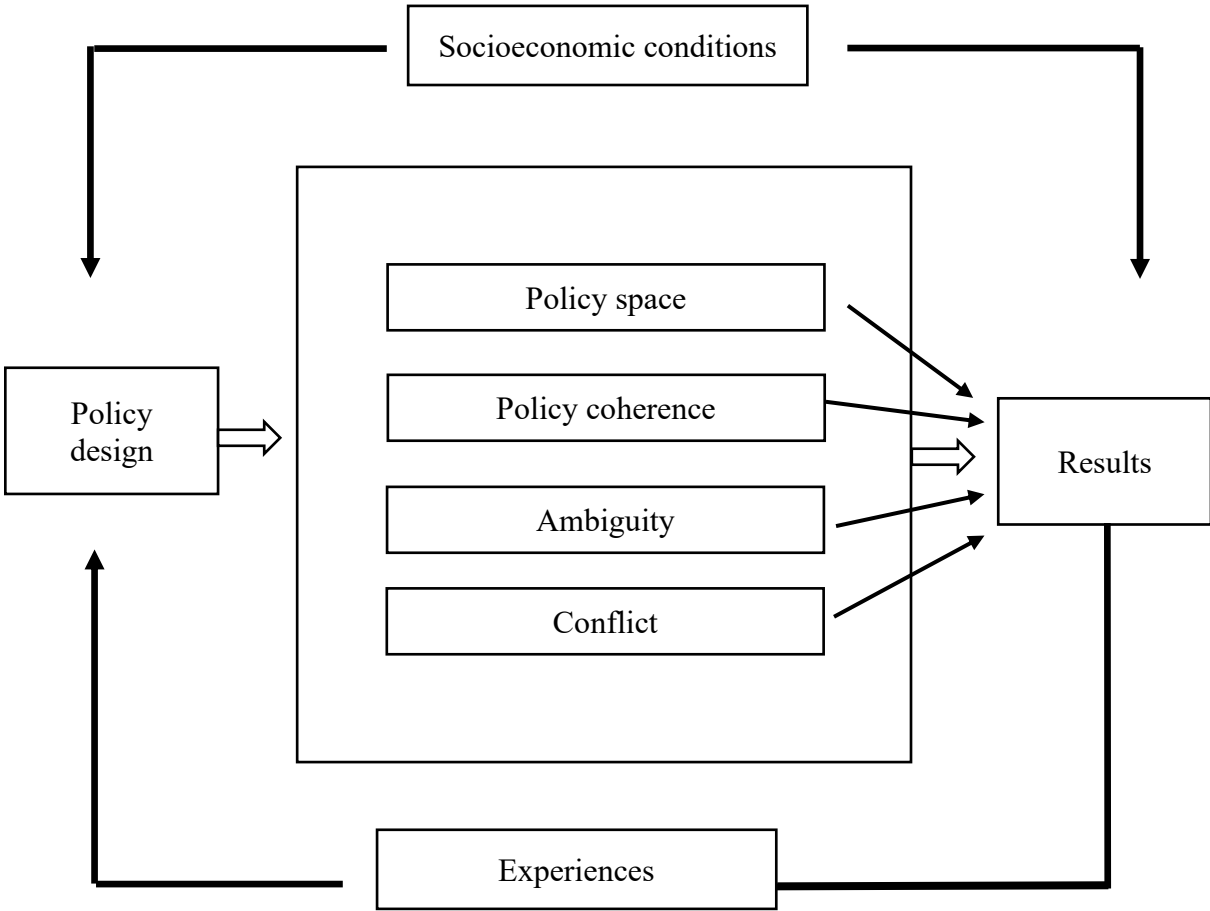


Figure 7: Operationalized implementation model. Based on Winter and Nielsen (2008) (Winter & Nielsen, 2008, p. 18).

In figure seven, the theoretical framework utilized in this analysis is depicted, which comprises a set of variables to be examined in detail. Winter and Nielsen’s model has been adapted to suit the variables and research question at hand. Matland’s model is included as variables, as a part of the operationalisation of Winter and Nielsen’s model. The policy design for energy poverty served as the foundation for the entire implementation process, and the dependent variable is the resulting outcome of the implementation process. Situated in the centre of the model are four other influential variables, including policy space, policy

coherence, ambiguity and conflict, all of which are anticipated to affect the dependent variable. Furthermore, the socioeconomic conditions in Malawi have an impact on both the outcome and policy design, while experiences are expected to influence future policy design.

By using the implementation approach, it will be possible to investigate the characteristics of the government's efforts to reduce energy poverty in Malawi, as well as the socioeconomic conditions affecting the local context. This approach can also help identify the features of the implementation process that may explain why Malawi has not successfully reduced energy poverty despite consistent citizen demand and considerable foreign aid. PCSD can help to investigate the extent to which policies related to SDG 7 are coherent with national policies in Malawi. This approach can help to ensure that policies related to energy poverty are aligned with other policies. Using PCSD can also help identify potential negative spillover effects that may hinder efforts in other regions in achieving the SDGs.

A combination of the implementation approach and PCSD can help to provide a more holistic understanding of the complex policy environment in Malawi and how it impacts energy poverty. It can also suggest ways to improve policy coherence and policy space to better address energy poverty in the country.

How will this theoretical framework be used to answer the problem statement?

I will use the implementation approach to analyse what happens in the process after a political decision has been made and investigate what can explain why Malawi has not succeeded in reducing energy poverty. I will begin by looking into the characteristics of the Government of Malawi's efforts to reduce energy poverty, as well as socioeconomic conditions affecting the local conditions in Malawi (Winter & Nielsen, 2008, p. 18). The PCSD framework will be used to investigate whether the national plans to reduce energy poverty are coherent with the international aid donor's plans. Using these theoretical approaches while examining the characteristics of energy poverty in Malawi (and why the country has failed to improve access to electricity for its population despite consistent citizen demand and considerable foreign aid) will enable me to establish some of the causes of why Malawi has not succeeded in reducing its energy poverty.

While critically examining why Malawi has not succeeded in reducing its energy poverty, I will mainly rely on Kjellberg and Reitan's phases four to six [guidelines/regulations, activity

by local entities and results of the measure] and assume that implementation is understood as both the execution and realisation of public policy. I understand the implementation process as a continuous process where it is possible to make adaptations to the context in which it is being implemented. The implementation process is thus how the municipalities transform the policy's intention into action and is neither a technical nor an automatic process (Winter & Nielsen, 2008, p. 14). Therefore, I will examine whether the national plans to reduce energy poverty have been successfully implemented and how the features of the implementation process can explain why Malawi has not successfully reduced energy poverty.

Policy coherence, on the other hand, refers to the extent to which policies across different domains are consistent and aligned with each other (OECD, 2005, p. 120). In the context of addressing energy poverty in Malawi, policy coherence is important because it can affect the effectiveness of policy interventions aimed at energy poverty. For example, if policies related to energy access are not aligned with policies related to economic development, there may be a limited impact on reducing energy poverty. When implementing policies there needs to be coherence between the local policies implemented, as well as the international policies. Including the theory of policy coherence will ensure that the local context, as well as the involvement of multiple actors with competing interests, are included in the analysis (Häbel & Hakala, 2021, p. 634). By including policy coherence, the complex policy environment in Malawi, and how it impacts energy poverty will be included in the analysis. This can help identify potential barriers to effective policy implementation and suggest ways to improve policy coherence to better address energy poverty in the country.

Policy coherence and PCSD will be used to investigate whether SDG 7 are coherent with the national policies in Malawi and whether this can be used as an explanation as to why Malawi has not succeeded in reducing its energy poverty. Previously, PCSD has been used to investigate the 2030 agenda in general, specifying it to SDG 7 will give insight into how the government in Malawi, and the international donors are working to reduce energy poverty, as well as if their goals are coherent. Using PCSD to investigate whether SDG 7 are coherent with the national policies in Malawi will involve looking into whether the government in Malawi have established a national plan to achieve SDG 7, and if their domestic policies address potential negative spillover effects which may hinder efforts in other regions in achieving the SDGs, if the government promote more integrated, cross-sectoral processes of policy-making involving all relevant stakeholders, and if specific actions have been

undertaken to mobilise in a coherent manner all available resources for SDG 7 (OECD, 2015, p. 23).

Using the implementation approach to examine the characteristics of the government's efforts to reduce energy poverty, potential barriers to effective policy implementation will be identified. Moreover, theories of policy coherence and policy space will be employed to investigate how international donors impact national policies in Malawi, and whether SDG 7 is coherent with the national policies. By including these theoretical approaches, the study aims to provide a comprehensive understanding of the complex policy environment in Malawi and suggest ways to improve policy coherence to better address energy poverty in the country.

CHAPTER 3: Implementing Energy Policy in Malawi

Malawi is a landlocked country with a population estimated to be about 20 million (Mweninguwe, 2022). It is a democratic country with a multi-party system of governance, which was established in 1994 following the end of the one-party rule (Freedom House, 2022). However, Malawi has struggled with issues of corruption, and Transparency International ranked it 123 out of 180 countries on its 2021 Corruption Perceptions Index (Transparency International, 2021).

Due to high poverty levels, most households in Malawi rely on traditional firewood (77%) and charcoal (18%) for cooking, with only a small minority (2%) using electricity. In terms of lighting, batteries are the most common source (53%), followed by electricity (11%), solar lighting (7%) and candles (6%) (The European Union, 2022, p. 5). The number of households without access to electricity is currently estimated to be 3.2 million (ibid). As the population grows and the economy experiences slow but steady growth, there has been a gradual increase in energy demand. The household sector has the highest demand, accounting for 83 per cent of net energy consumed due to high poverty levels and low levels of economic activity (ibid). The energy intensity, which is the ratio of electricity consumed to GDP, is predicted to triple between 2017 and 2037. Although substantial, this increase is consistent with Malawi's goal of becoming a middle-income country by 2063.

To address Malawi's power generation needs, the government created the Integrated Resource Plan (IRP 2016-2020, currently under review) as a strategic plan to attain reliable and cost-effective energy resources (World Bank, 2022). Currently, Malawi has an estimated installed generation capacity of 532 megawatts (MW), consisting of 372 MW from hydroelectric sources, 60 MW from solar, 18.5 from biomass, and 141.5 MW from diesel sources. (The European Union, 2022, p. 6) Although hydropower is the primary source of electricity in Malawi, it is highly vulnerable to climate risks, as demonstrated by the effects of Tropical Storm Ana in January 2022 (African Energy, 2023). Despite recent investments in solar power, the contribution of non-hydropower renewable energy to Malawi's energy mix remains low (Power Market LTD; Government of Malawi, 2022, p. 16). This chapter commences with an overview of the energy poverty scenario prevalent in Malawi, accompanied by an exploration of the national strategies aimed at curbing it.

3.1. The landscape of energy poverty

In January 2022, the tropical storm “Ana” had a significant impact on Malawi, resulting in extensive displacement, flooding, and destruction of public and private infrastructure. At least 46 lives were lost, with 18 individuals unaccounted for and over 200 people injured (African Energy, 2022). The Malawi Department of Disaster Management Affairs reported that the cyclone affected nearly one million people, leading to the displacement of over 220,000 individuals who are currently residing in temporary camps (ibid). Moreover, the flooding caused by the cyclone had a devastating impact on Malawi’s power system. The Electricity Generation Company Ltd (EGENCO) reported that 271MW of generation capacity was lost from the hydropower units at Nkula, Tedzania, and Kapichira, which account for approximately half of the country’s total 537MW (Masina, 2022). In March 2023, Malawi was hit by the tropical cyclone “Freddy”, which once again had a profound impact on the electricity supply in Malawi, particularly in southern regions, where power blackouts and a shortage of running water have been reported since the cyclone's destruction peaked (Illmer, 2023).

The aftermath of “Ana” and “Freddy” has brought significant attention to Malawi’s national power grid. Following the receding of floodwaters, crucial services, such as hospitals, water treatment plants, and telecommunication infrastructure, have suffered a significant impact (Masina, 2022). The lack of access to electricity and clean water poses a significant threat to families, exposing them to the risk of diseases, while hospitals struggle to provide adequate care. Limited access to communication devices also hampers search and rescue efforts. The two cyclones had a huge effect on the national power grid and its efforts to deliver electricity to the population.

The energy sector plays a critical role in driving economic growth, improving living standards and reducing poverty in Malawi. The country faces significant challenges in meeting its energy demand and reducing energy poverty. In this part of the thesis, the structure of the energy sector in Malawi and the main characteristics of the government’s plans to reduce energy poverty will be examined. The sources of power, how the power sector is governed, and major government plans and strategies to reduce energy poverty will be outlined. Before moving on to an empirical focus, it is important to understand the local conditions of energy

poverty in Malawi. Understanding these local conditions will be essential in identifying why the country has struggled to reduce their energy poverty.

Sources of power

The demand for electricity is anticipated to increase in the medium to long-term due to the expansion of manufacturing, mining, and agricultural activities. Currently, hydropower is the main source of electricity in the country, contributing to approximately 68 per cent of the generation mix (Power Market LTD; Government of Malawi, 2022, p. 16). However, this reliance on hydropower has resulted in an unreliable power supply, particularly during the dry season when water levels are low, reducing the available hydro generation capacity to as low as 150 MW (ibid). Additionally, debris and silt during the rainy season frequently cause machine breakdowns, leading to intermittent power supply. In response, the Malawian government has prioritised the development and use of alternative technologies to complement and diversify the power source (Power Market LTD; Government of Malawi, 2022, p. 15). The country's year-round sunlight and strong winds provide openings to invest in solar and wind energy, while geological reports specify the occurrence of gas, coal and geothermal resources that could be harnessed for electricity generation (ibid). Furthermore, the availability of waste presents another opportunity for waste-to-energy generation.

The energy mix in Malawi is dominated by hydropower. The country has the potential for solar, and wind power generation. However, it heavily relies on charcoal, firewood and diesel generators for energy, which have significant damaging effects on the environment and human health. In order to develop effective implementation strategies, it is crucial to comprehend the energy sources accessible and their potential (Winter & Nielsen, 2008, p.19). The Government of Malawi's decisions regarding the selection of energy sources to exploit are crucial to the country's socioeconomic conditions. It is essential to consider the potential of available energy sources before making such decisions. However, the government's decision-making process is significantly impacted by the priorities of international donors, because of their aid-dependency. The dominance of hydropower as the primary energy source in Malawi is a clear illustration of the influence of international donors, particularly the World Bank, in the country's energy sector. The World Bank's prioritisation of hydropower projects has played a significant role in shaping Malawi's energy sector (World Bank, 2022a). Furthermore, the World Bank's reluctance to fund non-renewable energy projects is another factor contributing to Malawi's lack of gas production (ibid).

Source of power	Current supply	Potential
Hydropower	372 MW	<ul style="list-style-type: none"> - Provides low-cost electricity and is durable in the long term - Heavy reliance makes the electricity supply vulnerable to climate change impacts as most of the national grid electricity is hydro generated - To ensure electricity system stability, flexibility and peak demand, rapid and flexible generation sources are necessary in addition to hydropower
Solar power	60 MW	<ul style="list-style-type: none"> - The most abundant renewable energy source available in Malawi - Potential ranges from 1642.5 to 2555 kWh/m² per annum on a horizontal surface - Challenges such as high installation costs and intermittency need to be addressed
Diesel sources	141.5 MW	<ul style="list-style-type: none"> - Used in periods of peak demand and when hydroelectric power plants are not generating enough power - Diesel generators are expensive to operate and maintain, leading to high electricity tariffs - Increases greenhouse gas emissions
Wind power	0 MW	<ul style="list-style-type: none"> - Has the potential to generate electricity from wind in areas where the average wind speed is above five m/s at a height of 10 meters - Areas of moderate to high wind potential in the northern and central regions - The high capital cost of wind turbines remains a challenge
Gas	0 MW	<ul style="list-style-type: none"> - Potential to diversify the energy mix and reduce dependence on hydropower, firewood and charcoal - No current projects, but the government is promoting investment in Independent Power Producers (IPPs) who can import gas initially while exploring the potential sites in the country

Table 4: Energy sources in Malawi and their potential (Power Market LTD; Government of Malawi, 2022) (ESCOM, 2022).

Power sector governance

Governance here refers to the set of policies, institutions and regulations that shape the management, operation and development of the power sector. It involves decision-making processes that determine how electricity is produced, transmitted, distributed, and priced to ensure a reliable and affordable power supply to meet the needs of the consumers and the economy. The Ministry of Natural Resources, Energy and Mining (MoNREM) has the mandate to coordinate, facilitate and promote the participation of all stakeholders in the sustainable development, utilization, and management of these resources for Malawi's present and future generations (MoNREM, 2022). Malawi Energy Regulatory Authority (MERA) is responsible for regulating the energy sector, ensuring compliance with licensing conditions and safety standards, and promoting energy efficiency and savings (MERA, 2022).

In recent years, Malawi's energy sector has undergone significant reform initiatives, such as the unbundling of the national utility company, Electricity Supply Corporation of Malawi (ESCOM), and the establishment of Electricity Generation Company Malawi Limited (EGENCO) (International Finance Corporation, 2019). ESCOM's restructuring aimed to improve efficiency, reduce operational costs, and enhance service delivery to meet the country's growing electricity demand. On the other hand, EGENCO was created to operate and manage power generation assets, including hydropower plants, thermal plants, and diesel generators to increase the country's generation capacity. Power Market Limited (PML) was a key player in Malawi's energy sector, tasked with the responsibility of buying and selling electricity as a licensed Single Buyer (World Bank, 2019). The restructuring of Malawi's power market is ongoing, with strong interest from investors and political will for Independent Power Producers (IPPs) to enter the market (Ministry of Natural Resources, Energy and Mining, 2018). Below, the main components of the power sector, and its role are presented in figure eight.

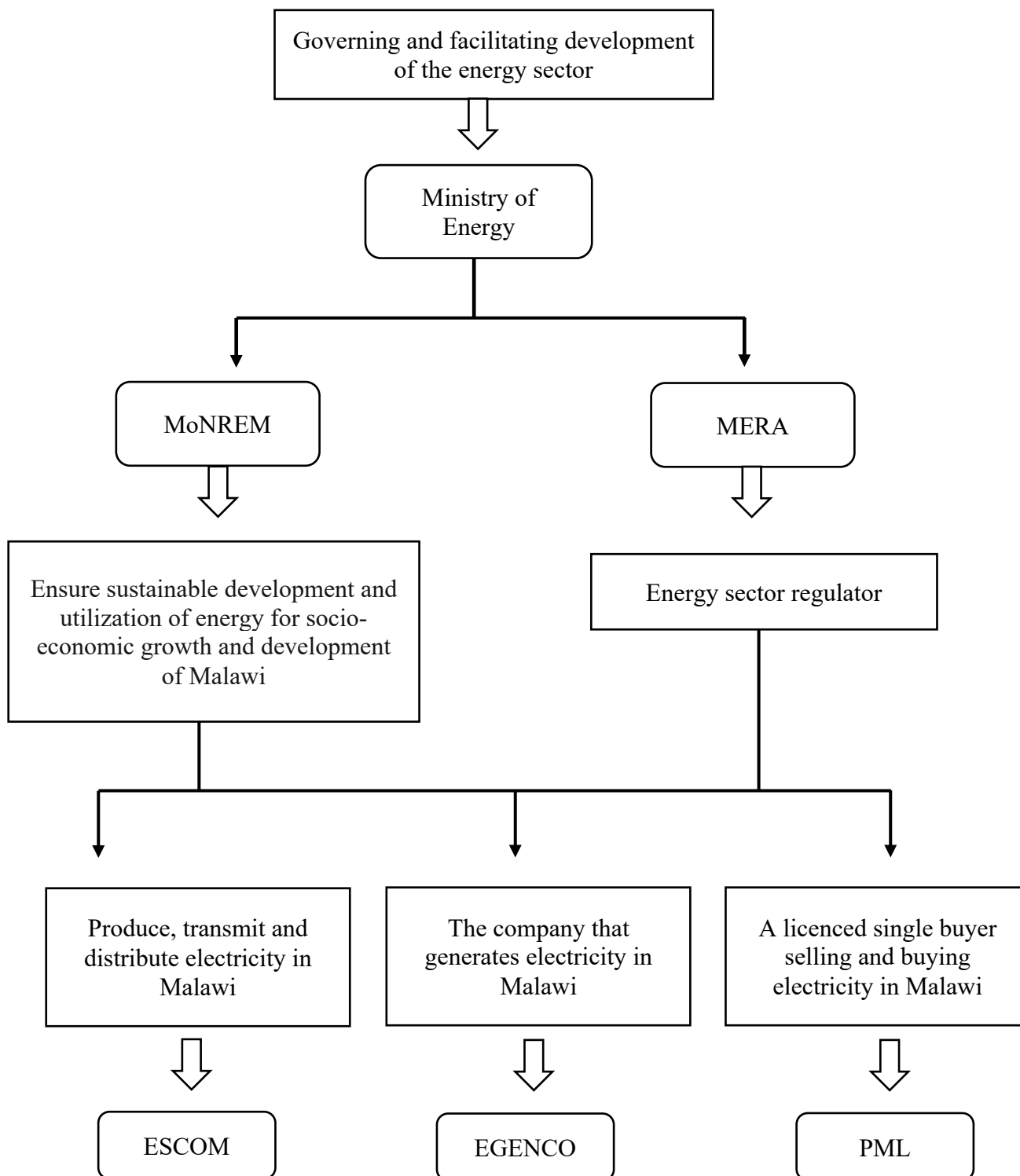


Figure 8: Outline of the power sector governance in Malawi before December 2022.

The presented model depicts a power sector comprising various actors with competing interests, which results in a high degree of competition (Matland, 1995, p. 153). Despite working towards the same goals, these actors have different responsibilities and thus varying interests in terms of donor funding and industry development. For example, MoNREM and

MERA may hold divergent interests with respect to energy access development. MoNREM prioritises sustainable development, thereby emphasising green energy sources. Conversely, MERA, tasked with regulating the energy sector, is primarily concerned with providing energy access to the populace, irrespective of its environmental impacts. Having many involved actors within the power sector might make policy formation and specification simple, but problems will probably arise when trying to implement them on the local level (Kjellberg & Reitan, 1995, p.32).

Previously, Malawi's power market was vertically integrated, with ESCOM monopolising generation, transmission, distribution, and system operations. However, the Electricity (Amendment) Act of 2016 restructured the power market with the aim of improving efficiency (Power Market LTD; Government of Malawi, 2022, p. 7). As a result, ESCOM was unbundled, with the generation function carved out to create EGENCO, while ESCOM retained transmission and distribution functions and assumed system and market operator and single buyer functions. Private sector participation in electricity generation was also allowed, and PML (Power Market Limited) was established as a single buyer responsible for purchasing and selling all-electric power (ibid). The Ministry of Energy provides direction and guidance on policy issues, while MERA regulates the market. Trading agreements are maintained between PML and all other market players, including EGENCO and IPPs, system and market operator, transmission licensee and the distribution licensee.

On December 22, 2022, the Malawian government dissolved PML, a public company established in 2018 under the Companies Act (CONREMA, 2023). The government transferred the Single Buyer License to the national power utility, ESCOM, in an effort to manage the transition in an orderly manner. A letter from the government stated that a transitional committee had been appointed to oversee the dissolution of PML and the management of the transitional process (ibid). The government's decision to dissolve PML and transfer the license was based on legal advice which confirmed the possibility of such a transfer. Malawi assigned the role of the single buyer to the national power utility, ESCOM, which facilitates the balancing of electricity supply and demand in real-time (ibid). Both NGOs and government representatives describe the recurring changes in the energy sector as a challenge for consistency. One informant working in the office of the President and Cabinet expressed that "the previous government used a lot of resources to establish PML and the new structure, now the new government throws that all away" (Lilongwe, 07.02.23).

In Malawi, power producers seeking to sell their products to customers must connect to the transmission and distribution system of the national grid, which is owned, operated and maintained by state-owned ESCOM (The Daily Times, 2023). The establishment of PML was aimed at creating an independent, credit-worthy entity that instils confidence in investors. The government’s decision to dissolve PML and transfer the Single Buyer License to ESCOM will likely have significant implications for the Malawian power sector. The dissolution of PML also made it more difficult for IPPs to access the energy market, while the Ministry of Energy approved power purchase agreements with nine IPPs that are expected to bring 343.25 MW to the national grid by 2024, only four out of 28 IPPs licensed in 2017 are currently operational (Phiri, 2023). After the decision to dissolve PML the power sector in Malawi is governed as illustrated in the figure nine.

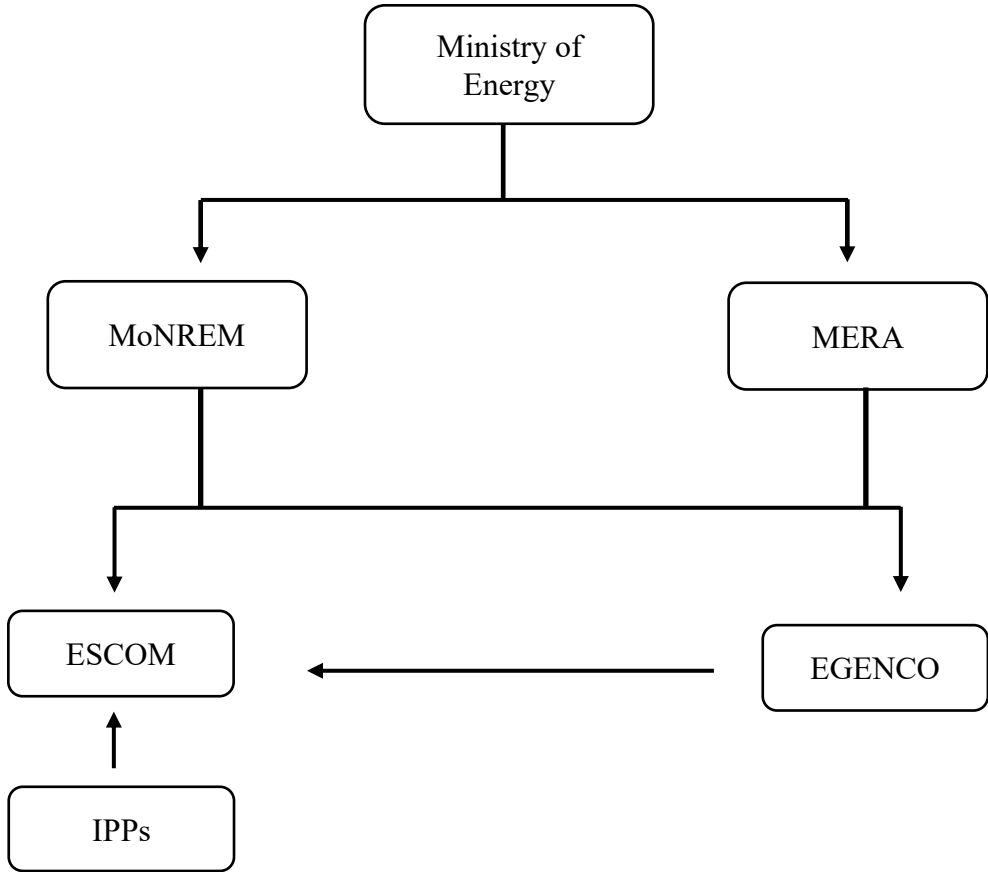


Figure 9: How the power sector in Malawi is currently governed, as of May 2023.

Compared to figure eight the main difference is that ESCOM now has the Single Buyer License and that PML is no longer an active component in the power sector. This results in

ESCOM having the responsibility to purchase all the electricity generated by EGENCO and IPPs and sell it to the consumers. This means that ESCOM will have to manage the financial and commercial risks associated with power purchase agreements with EGENCO and the IPPs. Assigning the role of the single buyer to ESCOM may significantly impact the energy sector in Malawi. It can help streamline the management of electricity supply and demand, improve the electricity grid's reliability, and ensure that the electricity pricing is fair and reflects the cost of generating and distributing electricity. Removing PML as an actor may also result in more effective policy implementation since fewer actors are involved, which will result in the level of conflict being reduced (Matland, 1995, p. 159). However, it can also place a significant financial and operational burden on ESCOM, which will have to manage the risks associated with power purchase agreements and balance electricity supply and demand in real-time.

Major government strategies to address energy poverty

The Government of Malawi has committed to implementing the 2030 Agenda. In pursuit of this agenda, the principle of “leaving no one behind” is emphasised by the international community as crucial, with a focus on ensuring access to basic needs for all citizens, regardless of location. The Malawi 2020 Voluntary National Review for the SDGs established that progress has been made on 17 per cent of the targets after five years of implementation, including targets related to food security, health, and education, energy poverty remains a significant challenge (Mwanamvekha, 2020, p. 60). International institutions recognise the importance of modern energy sources for poverty alleviation and acknowledge the complexity of addressing energy poverty while also reducing greenhouse gas emissions (GHG). Efforts by the international community, including the World Bank, the International Energy Agency (IEA), and the UN, have aimed to reduce energy poverty in the global south, yet the effectiveness of government measures and international aid coordination remains unclear.

Based on Agenda 2063 and the SDGs the National Planning Commission in Malawi has developed Malawi Vision 2063. This long-term development plan for Malawi aims to transform the country into an inclusive wealthy and self-reliant industrialized upper-middle-income nation by the year 2063 (Power Market LTD; Government of Malawi, 2022, p. 9). By acknowledging that Malawi needs to move away from being aid-dependent and prioritise self-reliance, the government established a need for inclusive economic growth (ibid). Malawi Vision 2063 emphasises the need for a collective effort to achieve the established goals. By

doing this the Government promoted ownership of the development and cooperation amongst both citizens and sectors. At the same time as acknowledging cooperation as an important part of achieving the goals, the private sector is enhanced as a key driver for economic growth. Defining the crucial role of the private sector emphasises partnerships and may result in quicker development as well as making the market more feasible for foreign private investments. Even though Malawi appears to have a clear plan on how to reduce energy poverty and experience economic growth within 2063, little progress has been made since the agenda was presented (The World Bank, 2019). Despite having clear plans, and using resources to write these plans, there seems to be a lack of resources to implement and realise them (Matland, 1995). On the other hand, having clear plans like Malawi Vision 2063 should make the country more attractive to international donors as well as private investments (Kjellberg & Reitan, 1995, p.32).

The Government of Malawi acknowledges that the nation's industrial and socioeconomic development hinges on access to modern, reliable, and sufficient energy (Government of Malawi, 2018a, p. 9). Throughout the National Energy Policy (2018), Malawi recognises its international obligations, including the Programme for Infrastructure Development in Africa (PIDA), the IEA, Power Africa Initiative, Sustainable Energy for All (SE4All) and the SDGs. The anticipated outcome of the policy is a diversified range of energy sources, an efficient and developed energy sector, sustainable and modernised energy services, improved living standards for all genders resulting from equitable access to energy services, and increased access to clean, sustainable, and affordable energy for all people. By defining eight priority areas the government enhances their main priorities, as well as sending a clear signal to international donors about what their prioritised areas are. These areas include electricity, biomass, petroleum fuels, bioethanol and other biofuels, liquefied petroleum gas, biogas and natural gas, coal, nuclear energy, and demand-side management (Government of Malawi, 2018a, pp. 10-38).

The implementation of the National Energy Policy has been slow due to various challenges, including limited financial resources, inadequate institutional capacity, and inadequate technical expertise (Government of Malawi, 2018a, p. 15). However, the government has taken steps to implement the policy, such as establishing MERA and the Rural Electrification Program (REP), which are responsible for regulating the energy sector and increasing access to electricity in rural areas (Government of Malawi, 2018a, pp. 10-38). The policy has had

both positive and negative effects on the population. On the positive side, the policy has increased access to electricity in rural areas through REP, which has improved the living standards of people living in rural areas. The policy has also led to some development of renewable energy sources, such as solar and wind power, which have reduced the country's dependence on traditional biomass for energy. On the negative side, the policy has led to an increase in electricity tariffs, making electricity unaffordable for many Malawians (Mchulu, 2022). The policy has also led to the displacement of people living in areas earmarked for the construction of hydropower dams, which has led to social and environmental problems.

The Malawi Growth and Development Strategy III (MGDS III) is the fourth of its kind and is designed to support Malawi's long-term development aspirations (Government of Malawi, 2018b, p. 60). The MGDS III aims to achieve sustainable economic growth and development through a focus on agricultural productivity, infrastructure development, human capital development and private sector development. Implementation of the MGDS III is being achieved through policy and institutional reforms, as well as through investment in various sectors, including agriculture, energy, transport, and education (Government of Malawi, 2018b, p. 63). The MGDS III has had both positive and negative effects on the population of Malawi. On the positive side, the strategy has led to increased investment in infrastructure development, improved access to education and health services, and increased agricultural productivity. On the negative side, however, the implementation of the strategy has been hindered by inadequate resources, limited institutional capacity and the effects of climate change on agricultural productivity (Mzale, 2020).

The Malawi Rural Electrification Programme (MAREP) was established in 1980 with ESCOM as the implementing agency, funded by both donors and the government (Ministry of Energy, 2022). Later, the government took over the implementation in 1995 and appointed the Department of Energy as the implementing agency. The program is executed in phases, with eight phases completed so far, including the extension of power distribution lines to district administration centres, major trading centres, tobacco growing areas, and the development of the 4.5 MW Wovwe Hydroelectric Power Plant (ibid). The objective of MAREP is to increase access to electricity in rural areas as part of the government's effort to reduce poverty and improve productivity and social services. One member of the parliament described MAREP as "giving electricity to the most rural areas and connecting them to the national grid" (Member of Parliament, Lilongwe, 30.01.23). MAREP is collaborating with ESCOM to

implement the Ndawala project, aimed at increasing the connectivity of rural households (Ministry of Energy, 2022). The project was introduced to address the challenge of low-income households being unable to connect to the electricity grid due to high connection fees, even after MAREP brought electricity close to their areas. Ndawala provides wiring services and connections through a soft loan of MWK 55,000.00, which is deducted from energy unit purchases, with 40 per cent of the cost deducted from each purchase (ibid). The Ndawala project, which started in 2019, has connected 9,156 households out of the planned 19,982 (ibid). This illustrates that MAREP might have a payment model that fits the economies of the rural population.

As illustrated above there are a lot of similarities among the plans and their objective seems to be the same; enhance the development of Malawi. However, these plans face challenges in implementation and coherency. Malawi has outlined clear goals for what they want to achieve in reducing energy poverty, as well as plans on how to achieve those goals. However, there seems to be a high degree of conflict between the different plans and political departments. These conflicts can be seen as a result of the complexity of energy poverty and the high number of plans and departments working on reduction. This results in the outcomes of the policies being determined by power dynamics and negotiations with politicians and international donors (Matland, 1995, p. 160). The issues seem to be established when implementing the plans on a local level because there is a lack of funds and coherence with the needs of the local population (Kjellberg & Reitan, 1995, p.32). If the needs of the local population were integrated as an important aspect of the national plans to reduce energy poverty the policies would have been more complementary and therefore maximising the impact of limited recourse (Häbel & Hakala, 2021, p. 634). On the one hand, the Government of Malawi has come far in establishing plans and making them available to international donors. On the other hand, the government is struggling to realise these plans due to a lack of coherence and high conflict among the different plans and political departments. Despite the efforts made by the government, the population still suffers from severe energy poverty, which points to a need for more efficient strategies.

CHAPTER 4: Affordability, access, and the role of international donors

Access to affordable electricity is a critical component in the pursuit of sustainable development and poverty reduction. However, Malawi, like many developing countries have struggled to provide electricity to its citizens, with over 85 per cent of its population living without access to electricity (Power Market LTD; Government of Malawi, 2022, p. 6). While several factors contribute to this energy poverty, the lack of affordability of electricity is one of the main reasons behind the slow progress towards achieving SDG 7 in Malawi. First, the main factors contributing to the lack of affordability and access to electricity in Malawi and how these factors have affected the country's progress towards achieving SDG 7 will be explored. The chapter begins with a discussion about whether rural people can afford electricity, and then move on to the country's energy mix, the National Charcoal Strategy, the lack of policy implementation, the huge regional differences, and the lack of foreign private investments. Together these six factors will present the main reasons for the lack of affordable electricity in Malawi, as well as how this affects Malawi's progress towards achieving SDG 7. Secondly, I will discuss the involvement of international donors and how they contribute to reducing energy poverty in Malawi. The focus will be on the Mpatamanga hydropower project, which is an example illustrating the potential and current involvement of international donors. By examining the lack of affordability and access to electricity in Malawi and the role of international donors I aim to provide a comprehensive understanding of the challenges faced by Malawi and its government when trying to reduce energy poverty.

4.1 Explaining the lack of affordability and access to electricity

Affordability

The high levels of poverty in Malawi are a matter of great concern as evident from the latest World Bank Poverty Assessment Report, which highlights that more than half of the population is poor and that poverty levels have remained stagnant over the past decade (World Bank, 2022b). The root causes of poverty in the country include high population growth, low per capita GDP growth, and dependence on low productivity, rain-fed-small-holder agriculture. Although poverty levels have reduced significantly in some rural areas, many people have fallen back into poverty due to climate shocks, with every three people moving out of poverty accompanied by four falling back in due to weather shocks (ibid). Furthermore, gender disparities exist in accessing resources and inputs, with women facing significant constraints in productivity and facing difficulty escaping poverty. A population

living in poverty may struggle to pay for electricity due to limited financial resources. When people are struggling to meet their basic needs, such as food, shelter, and healthcare, paying for electricity may not be a top priority (Kojima & Trimble, 2016, p. 11). In addition, poverty may limit access to credit for financing options that could be used to invest in alternative energy sources to pay for electricity bills (IEA, 2022a). Furthermore, poor infrastructure and limited access to electricity in rural areas may make it more difficult for people to access and afford electricity services.

Electricity prices and entrance fees in Malawi are relatively high, making it difficult for many low-income households to afford access to electricity. According to MERA, the average electricity tariff for residential consumers in urban areas is MWK 93.93 per kWh, which is one of the highest in the region (Ministry of Natural Resources, Energy and Mining, 2018). In addition, the entrance fee for connecting to the grid can be cost-prohibitive for many households, particularly those in rural areas (IEA, 2022a). For instance, the entrance fee for a single-phase connection is MWK 50,000, which is equivalent to the monthly income of a typical low-income household (Ministry of Natural Resources, Energy and Mining, 2018). As a result, many households are unable to prioritise electricity access over basic needs such as food and healthcare, perpetuating the cycle of poverty and limited access to energy services. The high entrance fees illustrate a lack of coherence between the government's goals to enhance grid connection and the rural population's ability to pay for it (Sianes, 2013, p.141). However, A Member of Parliament expressed that:

The government is going to move away from the demand-driven approach and rather give electricity where it is needed. We are going to implement a payment plan which is connected to the electricity bill, so the entrance fee is not too high for people that need to be connected to the grid (Member of Parliament, ruling party, Lilongwe, 07.02.23).



Figure 10: Rural area outside Blantyre and the City of Blantyre. Photo: Private, 2023

The difference in energy demand between urban and rural areas in Malawi is significant, and understanding these differences is critical for developing effective energy policies. In urban areas, there is a high demand for energy, which is primarily driven by industrial and commercial activities. These areas require significant amounts of electricity to power factories, offices, hotels, and other businesses. Additionally, healthcare facilities in urban areas require a stable and reliable energy supply to provide essential services to the population. The high energy demand in urban areas is also driven by the high-income earners who work in non-agricultural sectors, and therefore, have purchasing power. On the other hand, the energy demand in rural areas is different, and the current need for energy is not the same as in urban areas. In these areas, the main economic activity is agriculture, and most farming activities do not require electricity. However, the absence of electricity in rural areas leads to inefficient agriculture practices, such as manual irrigation and other labour-intensive tasks. Although rural communities do not require as much energy as urban areas for economic activities, they still have a significant demand for electricity for other basic needs, such as lightning and charging of phones. Households in rural areas would greatly benefit from access to small off-grid solar panels and solar lamps. It is worth noting that rural communities' demand for energy is closely linked to their level of economic development. As rural communities continue to develop and grow, their demand for energy will also increase.

In a country like Malawi, where the majority of the population lives in poverty, the goal of providing immediate access to electricity for all is not feasible. A diplomat posted to Lilongwe stated:

It is important to recognise that not everyone in rural areas will directly benefit from access to electricity, as their current lifestyle may not require a significant amount of electricity to improve their conditions. Therefore, the focus should be on developing general energy access that is tailored to the need of, for instance, industry, education, and healthcare. As the general access to energy develops and stabilises, it is expected to have a natural development where energy access eventually reaches rural areas (Norwegian diplomat, Lilongwe, 31.01.23).

However, it is important to note that this will take time and resources to accomplish. Therefore, the development of energy access in urban areas should be the starting point for the trickle-down effect, as the benefit and changes can eventually reach rural areas as society evolves. This approach would make the implementation process more effective as it is adapted to the local socioeconomic context in Malawi, as well as aligns with the SDGs, which emphasise the importance of creating sustainable and affordable access to energy (Winter & Nielsen, 2008, p.22). At the same time, it contradicts the goal of leaving no one behind, if urban areas are prioritised before rural. Despite this, the prioritisation of urban areas will contribute to natural development in rural areas, leading to a development that people in urban areas can afford. By prioritising, for instance, the needs of industrial development, the goal of providing access to energy can be achieved more efficiently, while also addressing the needs of the most vulnerable populations. Ultimately, this approach may contribute to the overall development of the country, improve living standards, and promote social and economic progress, but it will take time.

Constructing a national power grid that is unaffordable for the general population hinders the development of energy access in Malawi. The country's need for urbanisation arises due to the inability of numerous citizens to reside in rural areas and sustain inefficient agriculture. A shift towards urbanisation and industrialisation is, therefore, necessary to foster industrial growth. The lack of affordable energy has severe implications for the population, including compromised education, sexual violence, food insecurity and inadequate healthcare. Encouraging energy access in urban areas may attract more individuals from rural areas,

leading to overall development and enhanced energy access. It is important to note that progress in the realm of energy access in Malawi will require time and the development of financial capacity, as with any other developing country. As one of the least developed nations in the world, swift advancement in energy access cannot be expected. Despite the high demand for electricity, the population, especially in rural areas, lacks the means to pay for it.

Diversification of the energy mix

Malawi's energy mix relies on hydropower, which poses a significant challenge to the country's energy affordability. The country experiences frequent power outages due to the unpredictable and insufficient hydropower supply, leading to many households and businesses relying on expensive alternatives such as diesel generators. This reliance on expensive alternatives further perpetuates energy poverty, making electricity inaccessible to a significant proportion of the population. The importance of a diversified energy mix lies in its potential to enhance access to affordable and clean energy, which is crucial for achieving SDG 7. Over-reliance on a single source of energy, such as hydro, poses significant risks to energy security and affordability, particularly in the face of climate change impacts (IEA, 2022a). Diversification enables a more resilient and sustainable energy system by reducing vulnerability to supply shocks, improving energy access and affordability, and mitigating the environmental impact of energy generation (Gozgor & Paramati, 2022). Solar energy, for instance, can offer a clean and decentralised solution to energy poverty, but it cannot be relied on exclusively without proper storage mechanisms, which is expensive and requires local knowledge (World Bank, 2022a).

Solar, wind, and hydro are all renewable energy sources that have unique characteristics that can complement each other in an energy mix (IEA, 2022a). For instance, solar panels generate electricity only during daylight hours, while wind turbines require consistent wind speeds to produce electricity. In contrast, hydroelectric plants can produce electricity on demand but are limited by the amount of water flowing through the turbine (Santos, et al., 2020). To maximize the benefits of these renewable sources, a diversified energy mix is needed. Hydropower, which is the main source of electricity in Malawi, can be used to provide a stable base load of electricity. This energy source can be supplemented with electricity generated from wind and solar during periods of high energy demand, or when the sun is not shining, or the wind is not blowing.

The need for diversification of Malawi's energy mix was emphasised in my interactions with local politicians, NGOs, and international donors. A diversified energy mix that includes renewable sources such as wind and solar would provide a reliable and consistent supply of electricity, reducing the cost of electricity and improving accessibility for the population. However, the country's current lack of investment in alternative sources of energy has hindered progress towards achieving affordable energy for all, as outlined in SDG 7. While local NGOs and politicians in Malawi emphasised the importance of expanding solar energy to diversify the country's energy mix, international donors and Norwegian NGOs spoke more about hydropower. The local actors argued that increasing the use of solar energy would provide affordable and sustainable energy access, especially in rural areas where the national grid does not reach. However, international donors and Norwegian NGOs pointed out that solar energy cannot be stored and needs a backup system like hydropower or wind to be reliable. These conflicting views reflect the complexity of developing an effective and sustainable energy mix in Malawi and highlight the need for a comprehensive and context-specific approach (OECD, 2005, p.122).

The diversification of Malawi's energy mix has been hindered by various factors, including the lack of policy space and policy incoherence. The country's reliance on foreign aid has made it challenging to develop coherent policies that cater to the country's unique needs (OECD, 2005, p.121). The priorities of donors often dictate the direction of energy projects in Malawi, resulting in a lack of policy coherence. Furthermore, the country's aid dependence means that the government has limited control over policy decisions, as the priorities of international donors often take precedence over the needs of the country (Jackson, 2021, p. 3). This situation has resulted in a lack of diversification of the energy mix, as the government is limited in its ability to explore the potential of its energy sources (Kragelund, 2015, p. 254). The lack of policy coherence between the donor priorities and the needs of the local population in Malawi results in the government not being able to develop policies that cater to the specific needs of the country. Instead, policies are often shaped by the priorities of donors, which may not align with the needs of the local population in Malawi.

The recent damage of hydropower plants following natural disasters such as Cyclone Ana and Freddy highlights the vulnerability of Malawi's energy system. A diversified energy mix would provide a buffer against natural disasters and other unforeseen events, ensuring that the population has consistent and affordable access to electricity. Therefore, it is crucial for

Malawi to diversify its energy mix, reduce its reliance on hydropower, and prioritise investments in renewable energy sources to achieve affordable and reliable access to electricity. During an interaction with a representative of Power Market LTD (PML), I was apprised of a mapping exercise that had been conducted to identify potential sites of energy investments in Malawi. The mapping identified several promising locations for hydro, wind, and solar energy projects, which could help to diversify the country's energy mix. The informant further stated that "the government has recognised the importance of diversifying Malawi's energy mix and is actively promoting the development and adaptation of various technologies to complement its reliance on hydropower" (Director of Marketing and corporate services, PML, Lilongwe, 06.02.23).

Access to affordable and clean energy is a fundamental driver for development and is essential for achieving SDG 7. However, Malawi's energy mix poses a significant challenge to the country's energy affordability. The overreliance on hydropower results in unpredictable and insufficient supply, leading to frequent power outages. This energy poverty further perpetuates the cost of electricity, making it inaccessible to a significant proportion of the population. This lack of affordable and reliable energy access hinders progress towards achieving SDG 7. Over-reliance on a single source of energy such as hydro power poses a significant risk to energy security and affordability. A diversified energy mix that includes renewable sources such as wind and solar would provide a reliable and consistent supply of electricity, reducing the cost of electricity and improving accessibility for the population. However, the country's lack of investment in alternative sources of energy has hindered progress towards achieving affordable energy for all, as outlined in SDG 7.

The National Charcoal Strategy and continuation of illegal charcoal production

Charcoal production and use in Malawi pose a significant challenge to the country's environmental sustainability and energy security. More than 97 per cent of households in Malawi rely on illegally and unsustainably sourced biomass, such as charcoal and firewood, for domestic cooking and heating energy, leading to high levels of deforestation and forest degradation (The Ministry of Natural Resources, Energy and Mining, 2017, p. 1). This has downstream negative impacts on water availability, hydropower-generating capacity, and climate change vulnerability for Malawians. To address this challenge, the government has developed the National Charcoal Strategy (NCS), which presents a multi-sectoral framework and approach, focused on pillars that define opportunities to incrementally address problems

of charcoal production and demand in the near, medium, and long term (The Ministry of Natural Resources, Energy and Mining, 2017, p. 3). This strategy is coherent with the national energy policy and the MGDS III, however, there is a lack of coherence regarding the wishes of the rural population in Malawi, which currently rely heavily on charcoal, even though it is illegal. The lack of coherence regarding the rural population might suggest a lack of adaptation to the local context as well as a lack of alignment (OECD, 2015, p.23). An informant in a rural area outside Blantyre expressed “If I don’t produce and sell charcoal I lose my livelihood, it is worth risking a penalty from the government when I have no other options” (Ngulugi, 03.02.23). However, the strategy is heavily coherent with the international aid donor's goal to move away from non-renewable energy sources (World Bank, 2022a).

Illegal charcoal production and trade is a serious problem in Malawi, leading to deforestation and contributing to climate change. However, thanks to the adoption of a new amendment to the country’s Forestry Act, the government has the authority to use stronger penalties, fines, and jail time to discourage illegal forest activity (Parkinson, 2023). While this is an important step in combating illegal charcoal, it is also important to consider the impact on those who rely on the charcoal trade for their livelihoods. As Malawi looks to transition away from charcoal the country is facing a serious challenge. While deforestation and other environmental concerns associated with charcoal production make it an unsustainable source of fuel, Malawi has not developed good enough replacements. Despite the country’s Forestry Act and the NCS, people have to use charcoal because they simply have no other option that is reliable and affordable. A representative from the Norwegian Agency for Development Cooperation (Norad) stated that:

We could realistically pay women who work to extract charcoal and firewood to not cut down trees. Their wages are very low anyway, and the environmental consequences of their work have much greater costs. This could be an alternative while waiting for alternative jobs to be developed for these women (Senior Adviser in Norad, Oslo, 28.03.23).



Figure 11: Local Malawians transporting charcoal and firewood on the main road into the market in Lilongwe. Photo: Private, 2023.

Women in Malawi are disproportionately affected by the use of charcoal and firewood as cooking fuels, as it is the leading cause of respiratory illness, which primarily affects women and children (World Health Organisation, 2012, p. 71). Additionally, the informal nature of the charcoal and firewood value chains means that the government loses a potentially important source of revenue that could be used to support domestic development priorities (ibid). Furthermore, the use of biomass fuels negatively affects women who bear a disproportionate share of the burden of biomass energy collection (Kasalika, 2022). This burden is only exacerbated by deforestation, which is caused by the production of charcoal. Exposure to smoke-based pollutants and diseases also poses a significant risk. The implementation of the NCS seeks to address these challenges by promoting alternative cooking fuels and more efficient cookstoves, which will decrease pressure on deforestation. This will also ease the burden on women and girls, who currently spend significant amounts of time and effort collecting biomass fuels (The Ministry of Natural Resources, Energy and Mining, 2017, p. 4). Improving cookstove efficiency and switching to cleaner, modern sources of energy will also empower women by easing their burdens and contributing to gender equality.

Charcoal production and trade is an important source of livelihood for many households in Malawi, particularly for women who are engaged in various activities along the value chain, from harvesting and processing to transportation and sales. However, the negative impacts of charcoal on women's health are also significant, as they are disproportionately affected by the

indoor air pollution caused by charcoal and firewood burning (Kasalika, 2022). Women are also exposed to the risk of sexual violence and lose access to education when they must collect charcoal and firewood to support their household (Human Rights Council, 2022). While it is important to promote alternative sources of energy and reduce the use of charcoal, a complete ban on charcoal production would have severe economic consequences, especially for women who rely on it for their livelihoods. This is because the charcoal economy is deeply embedded in Malawi's informal sector and provides income for many households, particularly in rural areas where there are limited employment opportunities. Therefore, any efforts to transition to alternative sources of energy must also consider the economic and social implications for those involved in charcoal production and trade, especially women. A woman in a rural area outside Lilongwe stated that "Charcoal is my livelihood, if I do not collect it so my man can sell it on the market, we will lose our only income" (Lilongwe, 26.01.23). One way to address this issue is by promoting sustainable charcoal production practices and supporting the development of cleaner and more efficient charcoal stoves that can reduce the negative health impacts of charcoal burning.

In addition, promoting alternative income-generating activities from women who are involved in charcoal production and trade is crucial. This can be achieved through the development of alternative livelihoods, such as small-scale businesses or agricultural activities that can provide a sustainable source of income for women. The government can also support the development of microfinance programs and vocational training opportunities that can enable women to transition to other income-generating activities. Charcoal and firewood are deeply ingrained in Malawi's culture and economy. It is not a simple matter to shut it down without offering alternative economic opportunities to those who depend on it. It is crucial to provide affordable and reliable alternatives to energy and create job opportunities for women to ensure economic empowerment and sustainable development.

Ambitious policies that face implementation hurdles

As illustrated in previous chapters the Government of Malawi have developed plans and strategies on how they are supposed to reduce energy poverty. Despite the existence of several policies and strategies, the reality on the ground is quite different. Malawi continues to struggle with energy poverty and access to affordable and reliable energy remains a challenge for many households and businesses. The high cost of energy is a major contributor to this challenge. In Malawi, the cost of energy is among the highest in the region, making it

unaffordable for many households and businesses. Additionally, the cost of charcoal, the primary source of energy for many households, has been increasing due to the depletion of forest resources and the rising demand.

The failure to implement existing policies and strategies is a major reason for the unaffordability of energy in Malawi. Despite the government's commitment to diversifying the energy mix and promoting renewable energy, the country remains heavily reliant on hydropower, which is susceptible to seasonal fluctuations in water levels. This has resulted in power outages and load shedding, which disrupt economic activities and affect the livelihoods of many Malawians. In addition, the government has not made significant investments in renewable energy, which would not only reduce the cost of energy but also create employment opportunities and contribute to the country's economic growth. One government representative explained the difficulties of implementing policies being based on "donors not supporting but dictating the national plans" (Ministry of Energy, Lilongwe, 04.02.23).

Without access to affordable and reliable energy households and businesses are unable to fully participate in economic activities and improve their living standards. This, in turn, hinders the achievement of other SDGs, including SDG 1 on poverty reduction and SDG 8 on decent work and economic growth. Malawi Vision 2063 recognises the importance of energy in achieving sustainable development and highlights the need to accelerate efforts towards universal access to modern energy services. It is, therefore, imperative for the government to prioritise the implementation of energy policies and strategies to ensure affordable and reliable energy for all and accelerate progress towards SDG 7. Dr. Wiyo, a professor at Lilongwe University of Agriculture and Natural Resources expressed that "we are really good at making plans, but these plans are worth nothing when we do not know how to implement them" (Lilongwe, 08.02.23). Malawi has established several national policies and strategies aimed at reducing energy poverty, which outlines the country's clear plan to reduce energy poverty and achieve SDG 7. These policies and strategies show that Malawi has a good plan on paper, but the lack of knowledge and resources has hindered the implementation of these plans, resulting in a lack of real impact on society. Therefore, it is crucial for the government and stakeholders to work together to ensure that these policies and strategies are implemented effectively to achieve their intended goals.

Solar energy is a highly abundant renewable energy source that is naturally provided through sunlight. The declining cost of solar power makes it an increasingly attractive energy source (Adenle, 2020). Although many areas in Malawi possess great potential for solar generation, the high cost of transmission currently limits its feasibility (ibid). Solar energy has the added benefits of producing low carbon emissions and minimal environmental hazards, making it an efficient way to generate electricity. The successful integration of solar energy into the national energy mix in Malawi will depend largely on the implementation of policies and strategies aimed at promoting solar energy adaption. During interviews with several local politicians, they often expressed frustration over the priorities set by donors and the lack of local adaption for their investments. Donors tend to have their own agendas and may not always align with the country's energy needs, or national plans (Kessides, 2017).

The lack of coordination between international aid donors and local stakeholders can lead to inefficient use of resources, duplicated efforts, and delays in the implementation of energy projects (IEA, 2022b). A representative from an NGO stated that “what the population need to see is actual change, the government's writings do not matter for the people living without electricity” (SunnyMoney, Lilongwe, 26.01.23). The efficacy of governmental plans and strategies is rendered inconsequential in the absence of their implementation. Within the context of rural areas, certain individuals have articulated their perception of a duplicitous governmental agenda aimed at feigning assistance whilst neglecting substantive action. For instance, one local informant expressed that “I cannot trust that the government will do something about the situation. They have promised us electricity for a long time, but nothing is happening” (Blantyre, 06.02.23).

The implementation of national strategies to reduce energy poverty is often hindered by the lack of finances and heavy reliance on donors. This is particularly evident in the case of building solar power plants, which is considerably more expensive in Africa compared to Europe due to the high cost of materials, lack of infrastructure, and inadequate local technical capacity (Mwathunga, et al., 2022). The reliance on international donors often means that the projects are designed and implemented to meet the priorities of the donors, rather than the needs of the local communities, resulting in limited long-term impact (The Ministry of Finance, 2022). Furthermore, the lack of financial resources and inadequate regulatory frameworks create barriers to private sector investment in renewable energy projects, further limiting the ability to diversify the energy mix (Sustainable Energy for All, 2020). To address

these challenges, there is a need for a comprehensive approach that involves building strong partnerships between the public and private sectors, increasing investment in renewable energy technologies, and developing regulatory frameworks that promote private sector investment and innovation. This would require the provision of adequate financial resources and technical capacity building to support the implementation of national strategies aimed at reducing energy poverty.

In Malawi, the population is characterised as passive, as observed by the lack of civil unrest since the country gained independence. When asking local people during informal interviews if they wanted electricity and whether they were frustrated with the current situation, they all answered “yes” to both questions. Still, no demonstrations occurred. There are a few critical journalists, writing about the situation and criticising the government. Despite widespread discussions regarding electricity access, the local population does not demonstrate or express dissatisfaction with the government’s lack of implementation. This has allowed the government to continue without facing any consequences. This passiveness of the population may be a contributing factor to the limited progress in the energy sector in Malawi. Had the government been pressured by the local population, it may have been compelled to produce results and improve the energy situation. As a local NGO representative in Lilongwe stated, “The population cannot continue to sit still, they need to get into the streets and demonstrate about the situation” (Lilongwe, 28.01.23).

Huge regional differences

Malawi is characterised by significant regional differences. The country has three main regions: Northern, Central and Southern. These regions differ in various aspects such as population density, natural resources, and economic activity. For instance, the Northern region has relatively high rainfall and fertile soils, making it suitable for agricultural production, while the Southern region is generally drier and has a higher population density (World Bank, 2022). These regional differences affect the distribution and access to electricity. The Southern region, which is the most populated region, has a relatively high electrification rate compared to other regions (ibid). In contrast, the Northern region, with a low population density and fewer economic activities, has the lowest electrification rate (ibid). The regional differences in electrification rate have a direct impact on the affordability of electricity and the progress towards SDG 7. The low electrification rate in the Northern region leads to a high reliance on traditional biomass, such as firewood and charcoal, for

cooking and lighting (The United Nations, 2021). The cost of accessing modern electricity sources in this region is high due to the lack of infrastructure. The high reliance on traditional biomass not only affects the affordability of electricity but also contributed to deforestation and air pollution, which has health implications. In addition, the lack of electricity access in the Northern region affects the provision of social services, such as education and healthcare (Ministry of Energy, 2022). Therefore, addressing regional differences in electricity access is critical to ensuring affordable and sustainable energy for all Malawians.

During interviews with local NGOs, I was told that there was a huge difference in purchasing power between rural and urban households. This difference can be seen as a major barrier to the affordability of electricity for the rural population. Representatives from several different NGOs argued that the rural population must prioritise differently and cannot afford the cost of electricity, they would rather use the small amount of money they have on food or other necessities. Additionally, the rural population often lacked the knowledge and understanding of the benefits that electricity can bring to their daily lives. The lack of affordable energy for the rural population contributes to limited access to basic services, such as education, health, and communication. Since the rural population does not have access to on-grid electricity they mainly use charcoal and firewood as their source of energy. Some households have solar lamps and resourceful households do have off-grid solar panels.

On-grid and off-grid energy solutions in Malawi referred to different ways in which electricity is generated and distributed. On-grid energy solutions are provided by ESCOM and are distributed through the national grid system (Government of Malawi, 2018a). Off-grid solutions, on the other hand, are decentralised systems that generate and distribute electricity in areas where the national grid system does not reach (IEA, 2022a). In Malawi, off-grid solutions are mostly based on solar power and include solar home systems, mini-grids, and solar lanterns. Off-grid solutions are often more accessible to rural areas and households with low incomes and can provide a cheaper alternative to on-grid solutions. A representative from a local NGO stated that “off-grid solar lamps and panels can be more effective in rural areas than national grid connection because results are quicker and they are more easily adapted to the need of the rural population” (Community Energy Malawi, Lilongwe, 27.01.23). However, off-grid solutions can also face challenges such as high upfront costs, lack of access to finance, and inadequate policies and regulations (Samarakoon, 2020). On one hand, on-grid solutions are often expensive and can be unaffordable for many households, particularly in

rural areas with low incomes. On the other hand, off-grid solutions have the potential to provide access to electricity for those who are not reached by the national grid, but a lack of adequate policies and regulations may limit their potential impact (ibid).

Access to reliable and affordable energy can be argued both as a private and social good (Samarakoon, 2020). On one hand, energy access is crucial for individual households and businesses to function and thrive, and thus can be viewed as a private good. This perspective emphasizes the importance of market-based solutions and individual responsibility for energy consumption and costs. A representative from ESCOM stated that “we cannot sell electricity without the consumers paying for it. It seems to be a lot of demand for electricity but a very low will to pay for it” (Lilongwe, 31.01.23). On the other hand, energy access also has wider social benefits, including improved health outcomes, increased economic growth, education and reduced environmental impact. A representative from an NGO stated that “universal access to energy is important, we cannot differentiate based on who can pay for it. If people are not able to pay we need to develop industry” (Renewable Malawi, Lilongwe, 29.01.23). This perspective highlights the role of governmental and collective action in ensuring equitable access to energy resources. The lack of reliable and affordable energy in Malawi affects individual households and businesses, limiting their ability to function and prosper (Samarakoon, 2020).

The notion that the development of urban areas must precede that of rural areas has been a subject of debate in addressing energy poverty in Malawi. Some donors, as well as one Norwegian donor, during interviews, suggest that energy access should not be a priority in rural areas until development in urban areas, particularly in sectors of health, industry and education, is adequately addressed. The reasoning behind this argument is that the development of these urban areas will, in turn, lead to the development of rural areas. However, this approach neglects the fact that rural areas face unique challenges, including higher levels of poverty and less developed infrastructure, which limits access to basic services such as healthcare and education (Samarakoon, 2020). Moreover, denying energy access to rural areas on the grounds of affordability perpetuates the cycle of energy poverty, which undermines progress towards SDG 7.

Lack of private investments

Private investments in developing energy security in countries like Malawi are crucial in achieving the SDGs (Kharas & McArthur, 2015b). However, private investors are often hesitant to invest in developing countries due to the perceived high risk and uncertainty of investments paying off (Engen & Attridge, 2019). This creates a problem for the affordability of electricity in Malawi and progress towards SDG 7. Without significant private investments, Malawi is unable to secure the necessary funds to finance its energy projects, which makes it challenging to achieve affordable and reliable electricity for all. Moreover, the lack of a reliable energy supply hinders economic growth, discourages investment, and undermines the efforts of Malawi's government to provide social services like health and education. Therefore, finding ways to attract private investments while reducing risks and uncertainties is crucial to achieving energy security in Malawi.

During interviews conducted with international donors, it was noted that private investors are reluctant to invest in Malawi due to the uncertain investment climate and the perceived lack of return on investment. The role of the private sector is enhanced in the SDGs, and the achievement of SDG 7 requires significant involvement and investments from the private sector (Fukuda-Parr, 2016). The national plans and strategies to attract private investments have not yielded the desired results, as investors often prioritise quick returns and are hesitant to invest in the country's long-term energy needs. This has resulted in a lack of private investment in the energy sector, which ultimately affects the affordability of electricity in Malawi and the progress towards SDG 7. As the CEO of Scatec, Hans Olav Kvalvaag says “We need a guarantee for these types of projects. We cannot invest without someone ensuring payment. The private sector wants to take risks but cannot do it alone” (Oslo, 30.03.23). Without private investment, the government must rely on international aid and limited public funding to develop the energy sector, leading to slower and less efficient development of sustainable and affordable energy.

Malawi's energy sector is in dire need of investment to achieve universal access to energy. Given the reluctance of private investors to invest in the sector, there is a need for innovative financing mechanisms such as public-private partnerships. This may offer several benefits, including sharing risks and costs between the public and private sectors, creating incentives for private sector investments, and providing access to public resources such as land, regulatory frameworks, and infrastructure (Poulton & Macartney, 2012). For public-private

partnerships to succeed, there is a need for a supportive policy environment that ensures transparency, accountability, and fair distribution of benefits (ibid). In the case of Malawi's energy sector, a public-private partnership could bring the necessary investment and expertise required to develop the sector while ensuring that access to energy is equitable and affordable for all. However, public-private partnerships are not a panacea and require careful consideration of the trade-offs involved in sharing risks and costs between the public and private sectors (ibid). Therefore, there is a need for a robust legal framework that balances the interests of both parties while ensuring that the public interest is protected.

4.2 The role of foreign aid in reducing energy poverty

The issue of achieving SDG 7 and reducing energy poverty is multifaceted, encompassing various interconnected aspects. International aid provided to address one area of interest may have consequences for other areas. For instance, providing households with access to solar lamps may increase the potential for education due to longer hours of lighting, thereby contributing to achieving SDG 4 (quality education) in addition to SDG 7. Similarly, providing aid to other SDGs, such as SDG 1 (no poverty), may enhance an individual's ability to pay for electricity, ultimately improving the energy poverty situation. This part of the thesis delves into the role of international donors in addressing energy poverty, with a focus on the Mpatamanga hydropower project.

The Mpatamanga hydropower project serves as an intriguing case for examining how international donors can contribute to alleviating energy poverty in Malawi. Malawi has witnessed several donor-funded initiatives that have failed to yield desired outcomes, leaving the population still grappling with severe energy poverty (Page, 2019). Consequently, there is a significant risk associated with donor involvement in the country. However, the Mpatamanga project distinguishes itself by displaying a higher level of inclusivity, engaging both the Malawian government and local communities (Norfund, 2022b). Given the challenges encountered by many donor-led endeavours, this project is not exempt from risks. The consultation of local populations and respect for their preferences in terms of project implementation have been lacking in the past, leading to imposed solutions that may not cater to their specific needs. While tangible results have yet to be realised, the progress made this far in the project indicated a greater degree of involvement of the local population compared to previous donor-led initiatives (ibid). This particular case aims to highlight the potential

impact of international donors, albeit without conclusive evidence of project outcomes at this stage.

The Mpatamanga hydropower project is large-scale and complex infrastructure development, and as such, it requires significant investments of time and resources to be brought to fruition. According to the director of E&S Hydropower in Scatec, one of the main reasons why such projects have not been done before is that they take a long time to develop (Oslo, 13.02.23). In addition, the project's unique peaking plant design, which is intended to regulate water flow and energy output, poses technical challenges that must be carefully addressed. These challenges include the need for regulatory dams that can control the flow of water and the risk of disrupting the environment and local communities. Another major obstacle is the high cost of investment, which can be prohibitive for many investors. A representative at the Norwegian embassy in Lilongwe stated that “If Malawi demonstrates its commitment to the development of this project, it could pave the way for increased private investment, provided that the government fulfils its obligations, which is likely to boost the potential for private investments” (Minister Counsellor, Lilongwe, 31.01.23).

While the project is a significant development for Malawi’s energy sector, it does not address the issue of low grid access in the country. According to the World Bank, only eight per cent of the population in Malawi is connected to the national grid, meaning that only eight per cent of the population in Malawi will benefit from this project if the national grid is not expanded (The European Union, 2022, p. 6). It is important to note that Scatec’s role in the project is to develop and build the power plant, not to increase grid access. The development of the national grid capacity in Malawi faces several challenges. A representative from a local NGO in Lilongwe notes that “the government is heavily dependent on donor aid to fund any grid expansion projects, currently, it does not seem to pursue getting more of the population connected to the grid. Rather, they focus on buying electricity from Mozambique” (Nation Online, 2023). Additionally, the demand for grid access is high, as evidenced by the long queues at ESCOM (Howard, 2023) (Chavula, 2023). However, the supply of electricity is inadequate, and there is no point in expanding the grid if there is not enough power to distribute. Instead, the priority should be to ensure that the existing electricity supply is reliable and affordable enough for the population. In an interview with a member of the parliament, I was told that “the government is going to move away from the demand-driven approach and rather give electricity to where it is needed” (Member of Parliament, Lilongwe,

07.02.23). This would help move the population away from traditional energy sources and towards the national grid.

The issue of electricity demand is a widely discussed topic in the country that garners attention both in the media and among the local population. International donors, in partnership with private investors, hold significant potential to reduce energy poverty in Malawi, as demonstrated by the Mpatamanga project. The successful implementation of this project has the potential to increase the electricity supply in the national grid, which may attract further investments in the country. However, the success of this project is dependent on Malawi developing knowledge to take over the project themselves after a certain period of time. This would lead to socioeconomic development as locals would be able to work on the power plant. Nevertheless, it is worth considering whether this project aligns with the energy needs of the local population in Malawi. While the project may improve energy access for those already connected to the national grid, it may not necessarily increase energy access for those currently without access unless the national grid is expanded. Therefore, there is a need for greater cooperation among international donors in Malawi. The donors responsible for this project are dependent on others taking responsibility for developing the national grid to fully maximize the project's potential.

The Mpatamanga project appears to be a good example of how climate and development policies can be brought closer together to achieve sustainable development (Norfund, 2022a). By developing renewable energy sources, emissions can be avoided while increasing energy access and building resilience against the effects of climate change. The Norwegian Minister of International Development, Anne Beathe Tvinnereim, notes that “through the effective use of public support for the development of renewable energy, we help to avoid emissions and increase energy access” (ibid). In September 2022, the Government of Malawi, IFC, Scatec and EDF Energy signed a binding commercial agreement to undertake the co-development of the project (EDF, 2022). The agreement concluded that the selection process is undertaken by the government of Malawi to competitively select a private sector partner to finance, build and operate the hydropower plant under Malawi's Public-Private Partnership framework (ibid). The partnership agreement emphasises the importance of developing a partnership that involves the government and the local community in the project (Norfund, 2022b). The Malawian government is considered a partner in the project and is expected to take full ownership of the power plant in the future. This makes it necessary to ensure that they have

the competence to take over the power plant's operation. Local communities are integrated into the project through their involvement in the management and operational decision-making process. The project also aims to prioritise local recruitment and train them alongside international experts for an effective knowledge transfer and a smooth handover of responsibilities. The concession period of 30 years allows for a gradual transfer of ownership, with the government taking full control of the operation after 11 years of the plant's operation, which is a significant step towards ensuring the long-term sustainability aspect of the project (Scatec, 2022).

The project is a significant milestone in Malawi's energy sector, and its success will be instrumental in reducing energy shortages, enhancing energy security, and contributing to the country's sustainable development. The project is an example of how public and private sector partnerships can collaborate to achieve a common goal. Despite the progress made in the development of the project, there are still several challenges that need to be addressed. One of these is the limited capacity of the national grid, which may limit the impact of the project on expanding access to electricity in Malawi. Additionally, there are concerns about the potential environmental impact of the project and the local communities. It remains to be seen the extent to which the project will succeed in resolving the country's energy woes. The potential success of the project will depend on several factors, including the ability to expand the capacity of the national grid, the successful integration of local communities into the project, and the financial sustainability of the project. Despite these possible challenges, it appears from my analysis that the project has the potential to improve energy access in Malawi.

Donor involvement

Malawi is a recipient of aid from various donors, including China, the World Bank and Norway. However, the involvement of multiple actors with differing priorities and interests creates a complex web of aid delivery in Malawi. This complexity can lead to conflicting objectives and competing priorities that may impede the effective reduction of energy poverty (Häbel & Hakala, 2021, p.634). For instance, if one donor focuses on hydroelectric power projects, another may prioritise the development of solar energy. This misalignment of priorities can lead to the government shifting priorities and means to meet the conditionality of the donor, even if it does not align with the national strategies or plans to reduce energy poverty. Furthermore, the heavy involvement of donors may lead to fragmentation and a lack

of coordination among donors, creating confusion and inefficiency in the use of resources. As such, the multiplicity of aid donors in Malawi may hinder efforts to reduce energy poverty by creating a lack of coherence and coordination in the use of resources. Several donors being involved in the project might contribute to a lack of policy coherence between the project and the local population in Malawi because of conflicting interests and low ambiguity (Sianes, 2013, p.136). Even though the people living in Malawi desperately need energy there seems to be a lack of coherence between the needs of the rural population. Since the project is delivering on-grid electricity, a low percentage of the population will benefit from the project. Asked about what he thinks about the project a rural male answered “Such projects never benefit the rural people; we have to find and finance the solutions ourselves. I believe this project is a great example of that” (rural area outside Lilongwe, 26.01.23).

The impact of donors in Malawi is evident throughout the previously discussed National Charcoal Strategy. Donors have shifted away from funding non-renewable energy sources and are not supporting any new charcoal projects (World Bank, 2022a). Consequently, Malawi is being forced to move away from charcoal production to meet international goals for renewable energy and SDG 7. However, the lack of alternative energy sources in Malawi makes it difficult to achieve this goal, as the population primarily relies on charcoal for energy access (Power Market LTD; Government of Malawi, 2022, p. 6). This situation highlights a lack of coherence between the international agenda to transition to renewable energy sources and local populations in Malawi who depend on charcoal and firewood for both income and electricity. While the international community emphasises deforestation and renewable energy, the local population's main concern is energy access. The international donors' efforts to phase out charcoal production in Malawi without providing alternative sources of energy may remove the rural population's main source of livelihood and electricity. To promote coherence between the international agenda and local needs, donors should focus on finding reliable, affordable, and renewable replacements for charcoal and firewood. This approach would enable Malawi to reduce energy poverty while ensuring that the population's needs are met. Therefore, it is critical to address the energy needs of the population in the transition to renewable energy sources, and not just remove the non-renewable ones.

The conditionality and monitoring of aid from international donors play a significant role in shaping the dynamics of development assistance in Malawi. International donors often attach specific requirements and conditions to their aid, aiming to ensure transparency,

accountability, and effective utilization of funds (OECD, 2009). This typically involves adherence to procurement rules, anticorruption measures, reporting mechanisms, and the submission of progress reports (ibid). While these conditions are designed to promote good governance and effective implementation of development projects, they also pose challenges to Malawi's policy development, policy space and policy coherence. The pressure to meet conditions can divert resources, time, and attention away from other pressing priorities. It is important to strike a balance between ensuring accountability and fostering an environment that enables Malawi to effectively implement its policies and increase energy access.

Looking at it from the donors' perspective, it is essential to be involved in aid projects in Malawi, using various forms of conditionality and monitoring mechanisms, due to the high risk of investments and high levels of corruption in the country. When donor representatives are questioned on aid conditionality the typical response is that in countries like Malawi ensuring funds are used appropriately and reach the intended beneficiaries is their main priority. Government representatives, on the other hand, present aid conditionality and monitoring mechanisms as a challenge because they argue they hinder the ability to make decisions based on what they mean is the right thing to do based on their local knowledge. The constant monitoring of projects has the potential of reducing policy coherence and policy space by limiting the government's ability to make decisions based on local demands and needs. International donors need to work closely with the government and other stakeholders to build capacity and promote good governance. A representative from Norad said that "while this may require more time and resources from the donors, it is essential to minimise the risk of corruption and to ensure the effectiveness of aid programs" (Senior Adviser, Oslo, 28.02.23).

Another problem related to international donors observed during fieldwork was the fact that there were often too many donors involved in almost every development sector. The heavy involvement of different donors results in conflicting interests and impacts on government strategies and decisions. For instance, one official stated that:

If the World Bank wants to finance a project about solar power plants in rural areas, the government will shift their prioritisations and means to meet the conditionality of the World Bank to get funds for that project, even though the government would have prioritised differently (Lilongwe, 30.01.23).

From the government perspective, meeting the conditionality of donors to access funding for development projects can be seen as a necessary compromise. The government may prioritise certain projects, but funding constraints force them to make difficult choices. On the other hand, from the perspective of international donors, such conditionality is necessary to ensure that funds are directed towards specific objectives and that their investments are protected from misuse or waste. However, this may result in a lack of alignment with the government's priorities and strategies, which could hinder the achievement of long-term development goals (Sianes, 2013, p.141).

The implementation of national policies can also be negatively impacted by the high levels of uncertainty that arise from dependence on donor funding instead of predictable on-budget resource allocation (Pardoe, et al., 2020, p. 9). This dependence can result in competition between ministries as they vie for resources. In Malawi, multiple informants from different ministries expressed dissatisfaction with the competition for resources between ministries. Following Matland (1995, p.163) such competition for resources can also create barriers to coordination, hindering coherent cross-sectoral approaches necessary for effective climate change adaptation. The problem of coordination is exacerbated by the fact that all parties involved wish to be recognised for their contributions. One member of parliament expressed dissatisfaction with heavy involvement from international donors because they “want to impose policies on the government” (Member of Parliament, Lilongwe, 26.01.23). According to another official, “the factors of reliance on donors, competition for resources, and lack of coordination contribute to a reluctance to plan for the future” (Lilongwe, 30.01.23). This is mainly due to the uncertainty of resources being available as they depend on donor funding.

International donors have a huge potential for reducing energy poverty in Malawi, as they can provide funding and expertise for energy development projects. However, the conditionality and monitoring of the projects can also have negative consequences. Donors often have conflicting interests and priorities, and their conditionality may force the government to shift its priorities and means to meet the demands of the donors (Matland, 1995, p.163). This can lead to competition between government institutions for donor funding, creating barriers to coordination and hindering policy implementation (Sianes, 2013, p.141). The involvement of donors therefore must be adapted to local conditions and needs, and coordination between institutions and donors needs to be improved to ensure effective policy implementation. As a

former board member of ESCOM stated “The international donors have to understand how local community life works to be able to achieve goals” (Lilongwe, 31.01.23).

4.3 Explaining the lack of progress in improving access to electricity

Barriers to effective policy implementation

Implementation refers to the execution and realisation of public policy, this process is considered continuous and subject to adaptation based on feedback from the surrounding environment implementation (Kjellberg & Reitan, 1995, p. 133). As outlined in Chapter 3 Malawi has formulated various national policies and strategies aimed at mitigating energy poverty, however, progress towards the realisation of these objectives has been slow despite their existence for several years. This suggests that Malawi has effectively undertaken policy formulation, decision-making and guideline and regulation development (Kjellberg & Reitan phase 1-4). On the one hand, having these policies and strategies in place is commendable as they attract donors and indicate the government's commitment to improving the situation. On the other hand, the lack of progress could imply that the policies and strategies are overly ambitious and may not be effectively implemented. The government's propensity to design ambitious plans could result from multiple factors, such as the international community's goal of achieving affordable and clean energy for all by 2030 through SDG 7, which is not necessarily tailored to Malawi's needs. Despite this, the Malawian government feels compelled to align its national policies and strategies with this international goal to secure funding from donors for their projects.

The top-down implementation approach emphasises the role of decision-making bodies in imposing policy implementation on lower-level organisations (Matland, 1995). In Matland's approach, plans formulated at the national level are expected to be implemented by local communities without modifying the content of the plans. As such, local communities are viewed as instruments for the state to attain its goals, rather than an active participant in the policy-making process. From an international perspective, the achievement of SDG 7, a goal established by global actors, is expected to be implemented in Malawi without any alteration to its content. This implies that Malawi must fulfil a goal for which it may lack the necessary knowledge or resources, while international donors anticipate their adherence to this goal in exchange for financial aid. Consequently, the Malawian government may dedicate a considerable amount of resources and time to adjust its policies and strategies to an object that it may not be capable of attaining. Furthermore, when the government sets forth plans that pledge to provide clean and affordable energy for all by 2030, it creates expectations among the population that may not be fulfilled, leading to a loss of faith in the government's ability

to deliver on its promises. One government representative expressed that “the policies are donor-driven. Budget support is targeted by interventions by the international donors, they have a grip around the money in Malawi” (Lilongwe, 03.02.23). This illustrates that the government feels pressured to adapt its policies and strategies to the demands of international donors.

From a local perspective, the top-down approach is exemplified in the Malawian government's efforts to include the rural population in the country's energy development plans, such as the NCS and MAREP. Despite these attempts, however, the government has not achieved significant progress in increasing energy access in rural areas. One possible explanation for this could be that the strategies are not tailored to the specific needs and circumstances of the rural population, who may not be able to afford grid access or may not see the immediate need for electrification. Alternatively, this may be reflected by the government's attempts to conform to the international goal of “leaving no one behind”, even if their resources could be more effectively allocated to other areas. According to a representative from a local NGO in Lilongwe, “the rural population are tired of getting promises of cheap electricity; they only want lightning and charging opportunities to make their everyday life simpler, they do not see the need for expensive grid-connection right now” (United Purpose, Lilongwe, 28.01.23). This statement suggests that the government's policies may be too ambitious for the rural population and not sufficiently tailored to their current priorities and needs.

An issue that poses a significant challenge to policy implementation in Malawi is the presence of conflicts among various ministries and areas, given the complex nature of reducing energy poverty which involves multiple departments, policy areas, stakeholders, and donors. The implementation of top-down policies in the energy sector in Malawi exacerbates these conflicts, as the government sets clear goals and means for implementation but struggles to allocate adequate resources to achieve them. Malawi's energy policies are characterised by a high level of conflict and a low level of ambiguity, which is evident in the limited progress made in realising the government's plans and strategies to address energy poverty (Matland, 1995, p. 163). As a professor at the University of Malawi's Chancellor College stated “The government seems to be pretending to want to do something about the situation but to be honest I do not believe they are making any real changes. I believe it is all bluff to attract aid”

(Blantyre, 06.02.23). This illustrates the frustration some are experiencing when governmental plans are not resulting in development.

The barriers to effective policy implementation in the country are multifaceted and can be viewed from various perspectives. Firstly, while having policies and strategies in place to address energy poverty is commendable, the lack of progress made this far suggests that policies may be overly ambitious and difficult to implement. The Malawian government may feel pressure to design ambitious plans to align with international goals, such as achieving affordable and clean energy for all by 2030, despite these goals not necessarily being tailored to Malawi's unique needs. Furthermore, the government's attempts to include the rural population in energy development plans through a top-down approach have not resulted in significant progress due to the strategies not being tailored to the specific needs of the rural population. This can result from a lack of affordability for grid access and for lack of perceived need for electrification. Additionally, conflicts among various ministries and areas pose significant challenges to policy implementation, given the complex nature of reducing energy poverty, involving multiple departments, policy areas, stakeholders, and donors. These issues are further exacerbated by the implementation of top-down policies in the energy sector in Malawi, which may set clear goals and means for the implementation but struggle to allocate adequate resources to achieve them. Overall, these challenges demonstrate the need for tailored policies that account for Malawi's unique circumstances, as well as coordinated efforts across various stakeholders to effectively address energy poverty in the country.

Policy incoherence – alignment and consistency

The implementation of SDG 7 involves three major challenges: ensuring integration, promoting alignment between local, national, and international levels, and overcoming fragmented policy actions (OECD, 2018). The achievement of policy coherence is crucial for ensuring integration, as it ensures that actions taken towards SDG 7 also contribute to progress in other SDGs. This approach helps to prevent the potential for achieving one goal at the expense of another and promotes sustained global progress. Moreover, policy coherence enables policymakers to understand the long-term impact of their decisions on future generations and how their choices will affect sustainable development in other parts of the world. Harmonizing Malawi's development policies with the global agenda could contribute to the country's efforts to achieve SDG 7. To achieve this, Malawi may need to formulate policies that prioritise investments in renewable energy infrastructure, promote energy

efficiency, and address the social and economic factors that perpetuate energy poverty (Häbel & Hakala, 2021, p. 639).

One informant working in the Office of the President and Cabinet (OPC) expressed that the “International community have their own agenda” (Lilongwe, 27.01.23). This statement implies that there is a lack of coherence between the international community’s agenda and the development the population in Malawi wants. On the one hand, it is not possible to say that there is a lack of coherence between the policies of the international community and the local policies and strategies in Malawi. This is because the donors affect the national policies implemented and the policies that are implemented are mainly “donor-driven” because Malawi itself cannot afford to implement these policies without funding from the international donors. This results in the policies in Malawi being coherent with international policies. On the other hand, even though the policies are coherent with the international agenda they may not be coherent with the needs and wishes of the local population in Malawi. During informal interviews with the local population in both urban and rural areas, I was introduced to the dissatisfaction among the local population regarding the involvement of international donors. The majority of those I spoke with felt that they were forced to implement policies that they believed were not tailored to their local needs and desires. This perception illustrates a lack of coherence between the national policies and the desires of the local population. A local inhabitant in the city of Blantyre expressed “If you look at the political economy you realise that most of the measures are driven by donors, but nothing by local bureaucrats. Donors are dictating what we should think” (Blantyre, 04.02.23).

Although Malawi’s policies may be in line with the international agenda, the issue arises when donors alter their priorities. This change results in the government having to adjust its plans and strategies to secure funding for its projects. Consequently, there is a lack of consistency, rapid changes, and a deficiency of long-term solutions. One government official stated that “the whole drama is between implementation and dragging between different actors” (Lilongwe, 27.01.23). The lack of coherence may not necessarily be between Malawi’s policies, but rather among the various actors involved in Malawi. With the significant involvement of diverse actors, Malawi must prioritize adapting its policies to align with the actor providing the largest potential funding. If donors prioritised funding based on Malawi’s established policies, rather than attempting to alter them, there might be more consistency in the local plans.

The concept of policy space is critical in ensuring the alignment and consistency of policies to reduce energy poverty in Malawi. It refers to the degree of flexibility that policymakers have in designing and implementing policy (Mayer, 2009, p. 373). This is particularly important in the context of energy poverty, as policy space can impact the types of policies that are feasible and the extent to which they can be implemented. As one informant noted when asked about policy space “The policies have to be aligned to funding, you need to spend what you have, and if you do not have anything you have to adapt to those who have” (Lilongwe, 01.02.23). External constraints, such as economic and political pressures, can limit policymakers’ policy space, making it difficult to address energy poverty effectively. Therefore, policymakers must prioritise policies that are feasible within their policy space while also considering the needs and preferences of the local population. As noted by a Member of Parliament:

The government should present their plans and have the donors give donations to those. Right now, the donors are deciding themselves. We cannot blame it on the donors, the government has written what they want but they are not pressing the donors to help achieve it (Lilongwe, 31.01.23).

Policy coherence is important when trying to reduce energy poverty due to the influence of external factors such as international aid donors on national policies. Harmonising Malawi’s energy policies with the global agenda could contribute to the country’s efforts to achieve SDG 7. To achieve this, Malawi may need to prioritise investments in renewable energy infrastructure, promote energy efficiency and address the social and economic factors that perpetuate energy poverty. However, despite the coherence between Malawi’s policies and the international agenda, policies may not be coherent with the needs and wishes of the local population. The heavy involvement of international donors in policymaking can result in policies being donor-driven and not tailored to local needs and desires. Furthermore, donors changing their priorities can lead to rapid changes, a lack of consistency, and a deficiency of long-term solutions. Policymakers must prioritise policies that are feasible within their policy space while also considering the needs and preferences of the local population. External constraints such as economic and political pressures can limit policymakers’ policy space, making it difficult to address energy poverty effectively. Thus, policymakers must strike a balance between aligning policies with funding sources and meeting local needs and preferences to effectively address energy poverty in Malawi. To conclude, the primary issue

concerning policy coherence in Malawi does not stem from a discrepancy with the global agenda, but rather from a discrepancy with the requirements of the local populace and the conflicting objectives of international actors.

Combined approach

The policy design in Malawi appears to be shaped by the conditions and conflicts associated with international aid donors, rather than the needs of the local population. The reduction of energy poverty is closely linked to the socioeconomic situation in Malawi. Due to the donor-driven nature of national policies and strategies, the policy space and coherence of policies are constrained. In the event of economic development in Malawi, an expansion of the policy space can be expected, leading to coherent policies that address the needs of the local population. The socioeconomic conditions in Malawi also affect the development of the energy sector, particularly in terms of access and affordability. To address this challenge, economic development is necessary, which could lead to reliable access to electricity in urban areas, urbanisation, and economic growth. This, in turn, could increase energy access in rural areas. However, given the current socioeconomic conditions in Malawi, developing energy access remains difficult as people in rural areas lack the financial means to pay for it.

The effectiveness of government policies is influenced by factors such as policy space, policy coherence, ambiguity, and conflict. In accordance with Matland's political implementation model, Malawi exhibits low ambiguity and high conflict, which stems from discrepancies in goals and political departments, as well as competition from funding from international donors (Matland, 1995, p.163). Viewed in relation to Kjellberg & Reitan's implementation phases four to six, Malawi appears to be struggling to progress beyond phase three, where guidelines and regulations are specified at the central level. The failure to adopt policies and strategies to suit local needs impedes successful implementation, thereby undermining policy outcomes. Despite pursuing initiatives to improve energy access for several years, large groups in the country continue to suffer from severe energy poverty.

The inability to advance beyond phase three of Kjellberg & Reitan's policy implementation model may be attributed to the absence of policy space and coherence. The country's limited policy space compels the government to rely heavily on international aid donors, thereby constraining the development of policies that account for the institutional and political context under which implementation occurs. Implementation theory is helpful in identifying barriers

to implementation. In the case of Malawi, a lack of policy coherence and policy space, as well as a high level of conflict was identified as barriers. On the other hand, Kjellberg & Reitan's policy implementation phases were helpful in identifying different phases in the implementation process but did not have much effect on the study other than identifying where in the process the implementation of energy policies and strategies stopped. Matland's political implementation model identified the implementation in Malawi as "political" which identified a top-down approach with a high level of conflict. Combining the ambiguity and conflict model, Winter's model and PCSD made it possible to identify why Malawi has not been able to reduce energy poverty.

CHAPTER 5: Conclusion

Access to modern energy is no longer a luxury, but a fundamental human need that lies at the very core of development. It illuminates homes, fuels essential services like pumping groundwater, refrigeration, and provides alternatives for cooking. Without it, achieving a decent standard of living becomes a herculean task. The global consensus is that energy poverty constitutes a major barrier to economic progress and has far-reaching implications for sustainable development. Its impacts are felt across various domains, including health, education, food security, gender equality, livelihoods, and poverty reduction. As such, addressing the issue of energy poverty is an urgent matter that requires global attention and concentrated efforts. This thesis has utilized the definition of energy poverty suggested by Sovacool and Van de Graaf (2020), which delineates it as a circumstance wherein an individual encounters challenges in accessing requisite energy within their home to meet basic needs due to a lack of resources or living conditions (2020, p. 121). The international community has been working towards SDG 7, which aims to ensure access to affordable, reliable, sustainable, and modern energy for all by 2030. Despite this only 11 per cent of the population in Malawi has access to electricity.

There is an acknowledged linkage between energy security and economic development. As previously mentioned in the thesis, almost 733 million people worldwide are living without access to affordable and clean energy. While SDG 7 calls for universal access to affordable, reliable and modern energy for all by 2030, Malawi continues to face challenges in this regard, with a significant portion of its population still lacking access to electricity. The international community, through various aid programs and initiatives, has been working with the Malawian government to reduce energy poverty in the country. However, despite these efforts, progress has been slow, and the question arises as to whether the international community's approach to addressing energy poverty in Malawi has been effective. The international community and the government in Malawi have been working towards achieving SDG 7 since 2015, why is the population in Malawi still suffering from severe energy poverty?

Incoherence in governmental plans

The Malawian government has made various efforts to alleviate energy poverty through the development of plans, policies and strategies. In its national plans and strategies to reduce

energy poverty, the government acknowledges that its industrial and socioeconomic development hinges on access to modern, reliable and sufficient energy. Through the National Energy Policy (2018), Agenda 2063, MGDS III and MAREP the Government of Malawi has outlined a detailed strategy on how to reduce the country's energy poverty. However, these policies and strategies have proved to be designed to meet the requirements of international donors, rather than the needs of the local population. This results in a lack of coherence between the policies and the local context. Consequently, there is often a lack of knowledge, financial resources, and access to technology to implement these policies effectively. The government's inability to deliver on its ambitious plans due to financial constraints only further exacerbates the problem. Despite the global focus on achieving SDG 7 and the efforts of the Malawian government, the lack of coherence between national policies and local needs has been a significant obstacle to reducing energy poverty in the country.

Lack of access to electricity

In Malawi, the disparity between rural and urban areas has resulted in a distinct difference in the need for electricity. The Malawian government acknowledges the importance of collective engagement in developing the energy sector to involve the entire population. However, it appears that the urban population's need for reliable access to electricity is prioritised over the rural population. This is because many people in rural areas cannot afford to connect to the grid or pay electricity bills as they must prioritise other expenditures related to daily life. By prioritising the development of energy access in urban areas, the country's industry and infrastructure will grow, leading to job opportunities and a higher purchasing power for rural people, which would eventually lead to a need for electricity in rural areas as well.

Nonetheless, this type of development takes a long time, and one cannot expect it to be achieved by 2030. The significant disparities between rural and urban areas and their need for electricity might explain why Malawi has not been able to reduce its energy poverty.

A significant challenge to the country's energy affordability is its reliance on hydropower. The diversification of Malawi's energy mix has been hindered by several contributing factors. The country has huge potential in solar and wind power generation but its reliance on foreign aid has made it difficult to develop policies that align with the unique needs of the country. A diversified energy mix would provide a reliable and consistent supply of electricity as well as increasing affordability. More than 97 per cent of the households in Malawi rely on charcoal and firewood for cooking and heating. This results in deforestation, which the government

tries to address through the NCS. Despite the efforts of the government to try to stop charcoal production, the production and trade of charcoal and firewood remain an important source of income for many households. To succeed in stopping illegal charcoal production, alternative sources of income and electricity need to be presented by the government. The dependence on charcoal and firewood, as well as the country's reliance on hydropower, contributes to Malawi's struggle to reduce its energy poverty.

Malawi's energy sector is in dire need of private investments to achieve universal access to energy. Without significant private investments, Malawi is unable to secure the necessary funds to finance its energy projects. Public-private partnerships should be enhanced to create incentives for private-sector investments. Implementation of national strategies to reduce energy poverty is often restricted by the lack of finances and heavy reliance on foreign aid. Making the energy sector in Malawi more accessible for private investments would reduce energy poverty because the country could increase funding for their energy projects.

Role of foreign aid

The Mpatamanga hydropower project is an example of how climate and development policies can be brought closer together to achieve sustainable development. The project illustrates the involvement of international donors and how they can contribute to the reduction of energy poverty through monitoring and conditionality. Only eight per cent of the population in Malawi is connected to the national grid, meaning that only eight per cent of the population in Malawi will benefit from this project if the national grid is not expanded. The project not addressing the issue of low grid access highlights the need for cooperation amongst donors, private investors, and the Government of Malawi, because the project depends on other actors taking responsibility for expanding the national grid. Despite this project being promising it is a quite new project and no results can currently be seen. However, if the project is successful, it will double the on-grid energy access in Malawi. Donors have the potential to reduce energy poverty in Malawi through funding and expertise in energy development projects. However, their conditionality and monitoring may lead to negative consequences, such as competition between government institutions for donor funding, hindering policy implementation. To ensure effective policy implementation, donor involvement should be adapted to local needs, and coordination between institutions and donors needs improvement.

Explaining the government's failure to improve energy access

There are several contributing factors to why Malawi has not been able to reduce its energy poverty. Firstly, the Malawian government has presented several plans and strategies to reduce energy poverty, but the results from these seem to be missing. The government's efforts to alleviate energy poverty have often been designed to meet the requirements of international donors rather than the needs of the local population. This results in a lack of policy coherence amongst the wants of the donors, and the needs of the local population. The lack of coherence leads to the implementation process stopping since the policies are not adopted to the local population in Malawi. Secondly, the disparity between rural and urban areas has resulted in a distinct difference in the need for electricity, which has led to a need for prioritisation of urban areas' energy access. Thirdly, the country is characterised by a lot of donors being involved, these donors often have conflicting conditionality and require monitoring.

In Malawi, policies tend to be designed to meet the conditions and conflicts of international aid donors rather than the need of the local population, hindering the reduction of energy poverty. Malawi's limited policy space and coherence results in heavy reliance on international aid, constraining policy development. The country's struggle to move beyond Kjellberg & Reitan's phase three is attributed to the lack of policy space and coherence, resulting in unsuccessful implementation. The high level of conflict and top-down approach to implementation identified by Matland's policy implementation model, Winter's model and PCSD help explain Malawi's inability to reduce energy poverty despite pursuing initiatives for several years. Economic development is necessary to increase energy access, but it remains challenging due to the current socioeconomic conditions in Malawi.

Effective policy implementation aimed at reducing energy poverty is hindered by various barriers. Regional differences across the country, as well as between rural and urban areas, result in differing levels of ability and willingness to pay for electricity. While the population desired access to electricity, the prioritisation of more fundamental needs such as food and clothing leads to a lack of financial resources to pay for it. Moreover, the plans presented by the government are often designed to be implemented by rural communities without modification, resulting in implementation stagnation. The involvement of aid agencies plays a significant role in reducing energy poverty, as they possess the ability to fund projects. However, their involvement may lead to the development of policies that align with national

agendas, rather than the needs of the local population. As Malawi is dependent on foreign aid to reduce energy poverty, this results in a policy environment that is incoherent with the unique circumstances of the country. In order to effectively address the issue of energy poverty, policies aimed at reducing energy poverty must be tailored to the country's unique circumstances, and coordinated efforts across various stakeholders must be undertaken. The development will take time, and the policies developed need to be adapted to the need of the local population in Malawi for the implementation to be successful.

The field of energy poverty in Malawi presents several important research questions that warrant further investigation. One such question pertains to how the rural population is affected by the lack of energy access. Given that rural households make up a significant portion of the country's population, it is essential to explore the extent to which they are impacted and whether off-grid solar power is sufficient to meet their basic needs. In addition, it is critical to examine the strategies employed by international donors in addressing energy poverty in countries such as Malawi. Specifically, we must better understand how and to what extent the international development agenda and priorities of Western countries are aligned with their aid policies and funding decisions. While many countries, including Norway, speak about the importance of promoting renewable energy, their own economic development has historically resulted from exploiting fossil fuels. An in-depth study of the results of the Mpatamanga hydropower project, when it is complete, would be interesting and offer important insights into the potential of the international community to address energy poverty in low-income country settings. Given the complexity of the issue, such research requires a multidisciplinary approach that incorporates insights from fields such as engineering, social science, and environmental studies. Answering these questions might provide valuable insights for addressing energy poverty in Malawi.

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Attachment

Interview Guide

1. Could you tell me about your background and how you became interested in the energy poverty issue in Malawi? / Could you tell me about your organisation and its mission?
2. Can you describe the current state of energy access in Malawi? What challenges do people face in obtaining energy services?
3. How does energy poverty in Malawi intersect with other development challenges?
4. What efforts are being made to address energy poverty in Malawi, both by the government and by civil society organisations?
5. Factors behind the lack of access to electricity
6. Do you feel like the SDGs/2030 Agenda is a helpful framework when addressing the issues of energy poverty?
7. What challenges do you see in addressing energy poverty in Malawi, and how can these be overcome?
8. In your view, what role can the international community play in supporting efforts to address energy poverty in Malawi?
9. Citizen demand, the difference between urban and rural?
10. Is there anything else you would like to add?