

STG Policy Papers

# POLICY BRIEF

## WHY DOES AN AFRICAN INTERPRETATION OF ENERGY POVERTY MATTER? A NOTE FOR SUB-SAHARAN (SSA) ENERGY POLICY ACTORS

**Authors:**

Samuel Weniga Anuga and Nduta Njenga

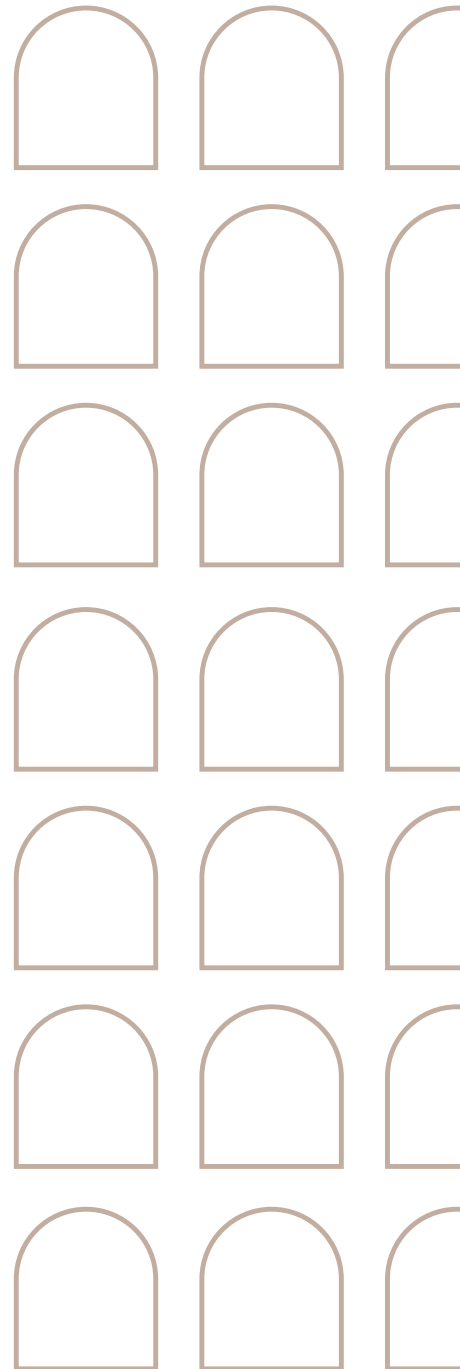
## EXECUTIVE SUMMARY

While nearly 1 billion people across the globe do not have access to modern energy (electricity) in their homes, Sub-Saharan Africa (SSA) accounts for 75% of this number. In SSA, there is an urgent need to deal conclusively with issues of energy poverty which have significant implications on the political, social and economic landscape. When compared with energy-rich countries, it is observable that SSA countries with underperforming energy sectors are unable to adequately power their economies toward attaining middle-class ambitions and long-term development. With these economic limitations, SSA countries are further constrained in their ability to build resilience towards health and environmental challenges. This discussion contextualises energy poverty and its nuance in SSA, highlights the impact of energy poverty on development, and presents policy and governance issues towards addressing energy poverty.

We conclude that a myriad of issues have contributed to impeding the progress toward alleviating energy poverty in Africa. These issues include, but are not limited to, global environmental change, poor infrastructure and challenges in governance and leadership in the form of dictatorships, political unrest and corruption. We recommend the Africa-Europe Foundation engages in capacity mapping on energy development in Africa to identify strategic energy sub-sectors that can be filled with the right leadership and personnel. Additionally, policies such as the European Green Deal from the European Union should take Africa into consideration, particularly in terms of promoting investments and partnerships for renewable energy development.

### Authors:

**Samuel Weniga Anugae** | Policy Leader Fellow, EUI School of Transnational Governance  
**Nduta Njenga** | Policy Leader Fellow, EUI School of Transnational Governance



## 1. INTRODUCTION

Defining the term energy poverty has been a challenge in both the policy field and in academia as there is no universally agreed upon definition. The World Economic Forum has previously defined energy poverty in its simplest form as the lack of access to sustainable modern energy services and products.<sup>1</sup> It distinguishes energy poverty from fuel poverty, which it refers to as the inability to attain an adequate level of energy services in one's home. It includes - but is not limited to - the ability to keep one's household adequately warm, cook food and have light all at a reasonable cost.<sup>2</sup> Another definition of energy poverty posits that it occurs where household energy costs are above a certain percentage (usually 10%) of disposable income, transport fuels not included.<sup>3</sup> This definition considers the relationship between the income of the occupants of the household and the cost of energy.

However, these definitions are narrow and do not recognise that the quantification of energy poverty may vary broadly from region to region based on numerous factors. These factors include the socio-economic context of countries and their populations, as well as various climatic conditions with some climates requiring more space heating while others requiring more space cooling, as is the case in SSA. This brief considers the developing country context and provides a coherent and holistic definition of energy poverty that takes these considerations into account.

In the SSA, energy poverty can therefore be said to be present in all conditions where there is a lack of access to adequate, affordable, reliable, quality, safe and sustainable energy services to support development.<sup>4</sup> This definition highlights two critical factors that need to be addressed if energy poverty is to be found; first, there must be the delivery of good quality energy access which must be

meaningful in order for it to be consequential. In this regard, the utility and scale of energy access is critical. Energy access should go beyond entry-level domestic connectivity and should be available at scale in order to power the productive centres - industrial, agricultural and manufacturing sectors - of the emerging economies in SSA.<sup>5</sup> Second, that access must be delivered affordably. Addressing these two features of energy poverty will then enable SSA economies to meet their middle-class ambitions and allow its populations to enjoy both dignity and opportunity.

Despite the challenges in a universal definition, it is clear that energy poverty affects developing and developed countries alike. In both cases, it is an obstacle to achieving the sustainable development goal number 7 (SDG 7) of ensuring access to affordable, reliable, sustainable and modern energy for all. Energy powers development and is seen as the 'golden thread' that ties together global efforts to alleviate poverty, level inequalities and cut pollution. Essentially, a robust energy system supports all sectors within the society including health, education, transport, construction, agriculture, and industry.

In rural communities in Africa, energy poverty, characterised by poor/ low quality energy access and affordability constraints, does not only limit integration into national development but also impedes the voices of people. The voices and stories of rural dwellers from all over Africa concerning livelihood, climate change and security cannot be heard due to communication barriers (telephones and media broadcast) caused by the lack of and inadequate access to energy. Adequate energy is essential to powering economic activities towards providing a more prosperous future for all. SSA has several energy setbacks, about 759 million in SSA - representing more than half of the region's population - do not have electricity, and about one-third of the

1 World Economic Forum (2015). What progress has been made in tackling energy poverty? Available at: <<https://www.weforum.org/agenda/2015/05/what-progress-has-been-made-in-tackling-energy-poverty/>> [Accessed 22 November 2021]. [2] Boardman, B., (2012).

2 Fuel Poverty - International Encyclopedia of Housing and Home. Available at: <<https://www.sciencedirect.com/referencework/9780080471716/international-encyclopedia-of-housing-and-home>> [Accessed 22 November 2021].

3 Fabbri, K., (2019). Urban fuel poverty. London, United Kingdom: Academic Press, pp. 259-267.

4 Habitat for Humanity and Energy poverty. Available at: <<https://www.habitat.org/emea/about/what-we-do/residential-energy-efficiency-households/energy-poverty>> [Accessed 22 November 2021]

5 IEA (2020). Defining energy access: 2020 methodology – Analysis - IEA. Available at: <<https://www.iea.org/articles/defining-energy-access-2020-methodology>> [Accessed 24 November 2021].

population lacks access to clean cooking fuels.<sup>6</sup> The relative severity of energy deprivation among households in SSA is therefore worth discussing to derive policy makers' interest, call for context-specific interventions and prioritise energy concerns in decision-making processes.

## **2. CONTEXTUALISING ENERGY POVERTY AND SECTORAL IMPACTS IN AFRICA**

Developed nations have capitalised on different sources of energy to promote economic growth and development. However, despite its significant potential, Africa continues to face significant energy challenges. The inadequate access to energy in most economies in SSA has stagnated sectoral growth and development. For instance, agricultural transformation, access to water, efficient transport and health systems are all dependent on energy availability. Across sectors, energy is a salient input for production, conversion, processing and commercialisation. Farmers' access to fuels or electricity for farm operations or crop processing is limited and costly. Agricultural mechanisation has either stagnated or retrogressed, with more than 60% of farm power still provided by manual labour, mostly from women and older children.<sup>7</sup> As agriculture remains a major economic activity in SSA, the future of agricultural productivity is determined by reliable energy supply. If energy access and supply can be improved and anticipated energy needs for agriculture met, then a potential roadblock to agriculture growth can be avoided.<sup>8</sup>

Aside from agriculture, energy poverty has and will continue to be an obstacle to transport development in Africa. Sustainable transport for the movement of people and goods is imperative to eradicate poverty, promote growth and smoothen the integration of countries within the African Union (AU). Road transport remains the dominant mode of motorised transport in the continent, accounting for 80% of goods traffic and 90% of

passenger traffic. With limited energy to power transport infrastructure, rail and maritime transport are a luxury and, in most countries, unavailable. The many rivers and lakes connecting different parts of Africa have great potential for inexpensive and environmentally friendly transport, but this has not been realised due to inability to fill the energy gaps which are critical in order to revolutionise the transport sector. Consequently, most African countries face huge costs associated with transportation. Compounding this is an estimated 225,000 deaths from road traffic accidents.<sup>9</sup>

With the ever-increasing effects of climate change, water scarcity has become a complex challenge in the continent of Africa. It is well observed that finding sufficient water to produce the energy needed for sectoral use has become an obstacle. Due to energy poverty, climate change has increased the vulnerability of energy systems. Less access to energy impedes technological development and innovation for improved water systems and increases stress in access to clean water for human, wildlife, and ecosystems welfare. Indeed, West Africa has already witnessed an increase in the number of households' water-stressed and excessive reliance on distance conveyance.

## **3. AFRICAN POLITICAL, GOVERNANCE AND INSTITUTIONAL ISSUES: A COMPLEX WEB FOR ENERGY POVERTY?**

As energy poverty further inhibits the progress of Africa's development, sluggish policy momentum and immature investment plans further curtail the ability of countries to meet the energy needs of their populations. Weak institutions, corruption and poor governance across some African countries are setbacks to ending energy poverty. When compared to other continents, Africa has several opportunities for energy systems transformation from the

<sup>6</sup> World Economic Forum (2015). What does energy access mean? Available at: <<https://www.weforum.org/agenda/2015/01/what-does-energy-access-mean/>> [Accessed 24 November 2021].

<sup>7</sup> African Energy Outlook (2019). Available at: <https://www.iea.org/reports/africa-energy-outlook> [Accessed 19 December 2021].

<sup>8</sup> International Energy Agency (2021). Energy Sub-Saharan Africa: promoting sustainable and inclusive economic growth. Available at: <https://www.iea.org/programmes/energy-sub-saharan-africa> [Accessed 18 December 2021].

<sup>9</sup> World Economic Forum (2021). Ending global energy poverty-how can we do better?. Available at: <https://www.weforum.org/agenda/2019/11/energy-poverty-africa-sdg7> [Accessed 19 December 2021].

ground up. Although specific individual countries (Kenya, Ethiopia, Ghana, Senegal and Rwanda) have made significant progress to provide access to modern energy services, the energy supply nevertheless barely reaches a quarter of the population in these respective countries. Meanwhile, countries like Togo and Benin still have approximately 90% of the population using biomass for cooking.<sup>10</sup>

It is projected that almost 50% of the population in Africa will still lack access to electricity and clean cooking by 2040.<sup>11</sup> With global advancement in renewable energy sources, Africa has the opportunity to undertake a less carbon-intensive model of development through clean energy. Even though the challenges and opportunities differ broadly across a diverse continent, renewables and natural gas can power Africa's growth and development and limit biomass consumption. Appropriate policies, committed leadership, and effective institutions can support the expansion of renewables and energy efficiency improvements.

#### **4. CONCLUSIONS AND POLICY RECOMMENDATIONS**

The severity of energy poverty in Africa needs relevant policies and actions towards alleviating energy poverty in energy deprived households and promoting sustainable industrial growth to eliminate extreme poverty. It is crucial for African communities to make their voices heard through the media, especially in this time of global environmental change which requires access to reliable energy for all. Governance and leadership challenges including several years of dictatorships, political unrest, corruption and poor infrastructure have severely limited progress to alleviate energy poverty.

In this complex web of challenges, we call on the African Union (AU) to take strategic steps towards ending energy poverty in the continent. As the AU is preparing a new climate strategy under the "AU's Agenda 2063: the Africa we want", we call on the AU to make energy transitions and actions to eradicate energy poverty appear prominently in this climate strategy. Moving forward, the AU needs to mobilize funds from multiple sources to support energy research, human resource development and localisation of energy technologies for the achievement of energy goals.

The European Union (EU) and the African Union (AU) have a long-standing cordial relationship, the AU should take advantage of this partnership and strengthen cooperation for energy transitions. The already established Africa-Europe Foundation under EU-AU relations is a step in the right direction as it engages political and civil society leaders to stimulate debates about challenges faced by African and European societies. We recommend the Africa-Europe Foundation engages in capacity mapping on energy development in Africa to identify strategic energy sub-sectors that can be filled with the right leadership and personnel.

<sup>10</sup> Gafa, D. W., & Egbendewe, A. Y. (2021). Energy poverty in rural West Africa and its determinants: Evidence from Senegal and Togo. *Energy Policy*, 156, 112476.

<sup>11</sup> Action Against Hunger (2020). Hunger relief in Africa. Available at: <https://www.actionagainsthunger.org/africa-hunger-relief-facts-charity-aid> [Accessed 20 November 2021]

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School of Transnational Governance  
European University Institute  
Via Camillo Cavour 65, Firenze, FI 50129  
Email: [stg.publications@eui.eu](mailto:stg.publications@eui.eu)

[www.eui.eu/stg](http://www.eui.eu/stg)



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